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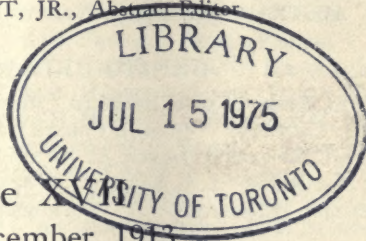
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INTERNATIONAL ABSTRACT OF SURGERY

JULY, 1913

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

ANÆSTHETICS

Hornowski: The Glands of Internal Secretion in a Case in which Death was Due to Chloroform (Śmierć wskutek chloroformu, a gruczoly wewętrznego wydzielania). *Livowski Tygodnik lek.*, 1913, viii, 97.

By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The author describes the case of a man 52 years of age in whom death occurred twenty-four hours after extirpation of the inguinal glands. Collapse symptoms supervened during the period of anæsthesia. At autopsy, the suprarenals showed endarteritis obliterans and marked fibrosis, so that the relation between the normal adrenal cortex and the pathologically involved cortex was as 1:8 in the left gland, while on the right the proportion was as 1:6. Comparative weights showed the functioning part of both cortices to weigh 1.59 gm. while the medullary parts weighed but 0.53 gm. The chromafin cells of the right adrenal stained very poorly, as did those of the sympathetic ganglion. As far as changes in the other glands of internal secretion are concerned, the parathyroids showed very few oxyphile cells; the thyroid, which weighed 43 gm., contained 7 adenomatous tumors 8-12 mm. in diameter. These cell aggregations, microscopically, appeared like the thyroid in Basedow's disease, according to Kocher's description showing epithelial hyperplasia and small amount of colloid. The other glands of internal secretion showed no changes. Only traces of the thymus were found imbedded in the fatty tissue of the mediastinum. Inasmuch as the heart showed no pathological changes, the author is of the opinion that death was due to adrenal insufficiency. Hornowski further discusses the questions why with such marked change in the suprarenals, no signs of Addison's disease were present, and also that the marked alteration in the thyroid produced no signs or symptoms of Base-

dow's disease. He finally reaches the conclusion that both diseases are probably polyglandular diseases and not dependent upon lesions of the adrenals or thyroid.

J. HORNOWSKI.

Jonnesco: General Spinal Anæsthesia (Über die allgemeine rückenmarksanästhesie). *Zentralbl. f. Chir.*, 1913, xl, 469.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

According to the experience of Jonnesco, an injection of stovaine combined with nitrate of strychnia may be made at any point of the spinal canal and without danger to the patient. In 1958 operations he had two deaths, which in part were attributable to other causes. The injections produce a complete anæsthesia from head to foot. For anæsthesia of the head, neck, upper extremities, and thorax, the injections should be made between the first and second dorsal vertebræ, for anæsthesia of the thoraco-abdominal region, the abdomen, pelvis and lower extremities, it should be made between the twelfth dorsal and first lumbar vertebræ. The preparations are kept sterile in two ampoules, according to the method of Racowitza. One contains the proper dose for pure stovaine, the other an aqueous solution of strychnia. One ccm. of the strychnia solution is drawn into the sterile syringe and emptied into the ampoule containing the stovaine; the solution is then ready for use. The maximum dose of stovaine is as follows: For adults: lower portion of body 6 cg.; upper portion of body 2-3 cg. For children and adolescents: lower portion of body 1-4 cg.; upper portion of body 0.25-2 cg. The dose of strychnia for anæsthesia of the lower portion of the body is 2 mg. for each cc. in adults; in younger individuals 0.5-1 mg.; for anæsthesia of the upper portion of the body, the dose of strychnia is 1 mg. in adults and 0.25-0.5 mg. per cc. in children and adolescents. If the general

condition is bad, as in achexia, in acute or chronic infections, shock or acute anæmia, $\frac{1}{3}$ to $\frac{2}{3}$ of the original dosage is sufficient. To avoid cerebral anæmia, perspiration, and similar conditions, the patient should be placed in a dorsal position immediately after the puncture. Still better, puncture may be performed in the lateral position. TIEGEL.

Harris: Hyoscine-Morphia Anæsthesia for Alcohol Injection in Neuralgia. *Lancet*, Lond., 1913, clxxxiv, 881. By Surg., Gynec. & Obst.

The author has treated 112 cases of trigeminal neuralgia besides numerous cases of supra-orbital and other forms of neuralgia. He doubts the possibility of finding with a needle the nerve trunks of the three divisions of the fifth nerve, and of injecting them with alcohol, especially at their deep foramina of exit from the skull, without causing so much pain as to make it a practical impossibility for a large proportion of subjects, especially women of a nervous type and already worn out with pain. He has always used the route described by Levy and Baudouin and also by Sicard, in which the needle is thrust through the side of the cheek underneath the zygoma into the zygomatic fossa. The only satisfactory proof that the nerve had been properly injected is anæsthesia of the skin and mucous membrane in the distribution of the nerve. Strong alcohol, when injected into the nerve trunk, instantly causes destruction of the nerve fibres with which it comes into contact. As a rule he gives $\frac{1}{3}$ gr. of morphia with 1.150 gr. of hyoscine hypodermically into the arm 20 minutes before commencing the injection process. When the needle is approaching the foramen ovale the patient usually shows some symptoms of sensitiveness, though it is not until the nerve is actually struck that a tingling sensation is felt in the lower lip and tongue; when this occurs the stylet should be removed from the needle and a syringe filled with a 3½ per cent eucaine solution fitted on, and a few drops then slowly injected.

After the lapse of half a minute, a few drops of 90 per cent alcohol should be injected slowly into the same spot. Almost instantly, as soon as a few drops of alcohol have been injected into the nerve, sensation of touch and pinprick becomes blunted on the lip, and slowly, two or three drops at a time, more spirit is injected until the anæsthesia is complete and the pinprick is not felt at all even as pressure. Usually 1 to 1½ cc. are required to produce this effect. The injection of the second division in the sphenomaxillary fossa is much less painful than is the corresponding process for the third division at the foramen ovale. However, the extraordinary calming effect of the hyoscine and morphia is most valuable, and patients who are suffering severe spasms of pain, or who are very nervous, will keep quite quiet and peaceful during the whole process, and yet will be able to answer at once to the skin tests for anæsthesia. He has seen only one case in which any ill effects occurred and this was only temporary.

DONALD C. BALFOUR.

Sievers: Paralysis of the Phrenic Nerve in Plexus Anæsthesia after Kulenkampff (Phrenicuslähmung bei Plexusanästhesie nach Kulenkampff). *Zentralbl. f. chir.*, 1913, xl, 338. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Fifteen minutes after the usual plexus anæsthesia with 20 ccm. of a 2% novocaine-bicarbonate solution for paræsthesia of the ulnar nerve, the patient began to complain of pain in the right side of his chest. At the same time a croupous respiration like that in a dry pleurisy developed. There was pain on pressure in the region of the 8-9 ribs, and a diminished excursion of the lower border of the lung on deep respiration. On examining with the X-ray there was a difference of the width of a hand from the left side on deep respiration. During the next three days the disturbances diminished quickly; only a mild crepitus and diminished breath sounds could be determined. On the fourth day X-ray again showed normal conditions.

The author discusses the possibility of the influence of the endoneural injection into the main trunk of the phrenic nerve in the neck, producing a subfascial diffusion, and an influence on the anterior and medial branches which descend to the dome of the pleura. The first method seems to him improbable. The pain can be explained by the effect on the sensitive fibres of the nerve. The fact that the symptoms do not regress as soon as the effect of the anæsthesia is worn off leads one to think of mechanical injuries (hæmorrhage, escape of air from the punctured lung). The first danger can develop only after an already existing disease of the lung; bilateral paralysis of the diaphragm does not result in asphyxia according to Duchenne. That the condition resulted from an injection into the pleura, the author thinks improbable because no pleuritis developed.

KULENKAMPPF.

Boothby: Present Day Methods of Anæsthesia. *J. Maine M. Ass.*, 1913, iii, 1219. By Surg., Gynec. & Obst.

From the point of view of the recent research work in anæsthesia, Boothby discusses the subject under three distinct headings: (1) The pharmacological problem, (2) the mechanical problem, and (3) the physiological problem.

Under the pharmacological problem is considered the advantages of nitrous oxide-oxygen-ether as opposed to ordinary ether, and the former is strongly approved if the following fundamental principles are observed: (1) avoidance of cyanosis at any time; (2) relaxation obtained by the addition of proper amounts of ether; (3) the availability of an apparatus such as he has recently described in conjunction with Cotton, that will (a) deliver a constant, even supply of nitrous oxide and oxygen, (b) render the supply visible so that the relative amounts of each gas can be estimated at a glance, (c) possess an efficient ether chamber, and (d) fitted with an airtight face-piece. He believes that while nitrous oxide anæsthesia is far more difficult to conduct

safely and satisfactorily than ordinary ether, and requires large experience and costly apparatus, yet when mastered it is at present the best method.

In connection with the mechanical problem, which deals with the maintaining of a free current of air through the mouth, pharynx, and larynx, Boothby mentions three methods — the method of intratracheal insufflation originated by Meltzer and Auer, the Crile nasal tubes, and the Davis-Sewall mouth gag. Intratracheal insufflation in intrathoracic operations is, without question, the method to be used. Its advantages in tongue operations are very great; its value is debatable in intracranial operations; and elsewhere it is not indicated except for obtaining practice in the method. In the hands of those well trained in its difficulties and the avoidable dangers, it is justifiably safe. For those untrained in its use, the Crile nasal tubes or Davis-Sewall mouth gags are preferable.

The physiology of respiration is also discussed at some length, and attention is called to the dangers of apnoea after a period of excessive breathing, as well as the possibility that acapnia is one of the conditions causing surgical shock.

Bloodgood: Studies in Blood Pressure Before, During and After Operations Under Local and General Anæsthesia. *Tr. Am. Gynec. Soc.,* 1913, May. By Surg., Gynec. & Obst.

Now that the mortality due to infection from faulty technique has been practically eliminated, the mortality from shock due to the trauma of the operation and the general anæsthetic—chloroform or ether—has become more prominent in the minds of observing surgeons.

The two factors over which we have the greatest control in shock during operation are the trauma of the operative procedure and the toxicity of the general anæsthetic.

Ether has been substituted for chloroform, because it is less toxic. At the present time nitrous oxide and oxygen are taking the place of ether for the same reason. Trauma from the operative manipulations can be reduced to a certain extent by gentleness and care. There is no doubt, however, that theoretically the employment of local anæsthesia during the operation will block most, or all, sensory afferent nerve impulses. In this way the brain can be temporarily disconnected from the wound.

Unfortunately for the development of this refinement of technique many operations can be performed on the ordinary individual with a low mortality in spite of toxic general anæsthesia and rough handling of the wound. Many surgeons do not realize this element in their mortality, in the post-operative complications, discomforts, and longer period of disability.

In order to appreciate the sensitiveness of the different tissues and the difficulty of successfully anæsthetizing them by local anæsthesia, a surgeon must perform as many operations under local anæsthesia as possible. Only in this way will he

train himself to successfully and completely isolate the brain from the field of operation. It is quite possible to infiltrate the tissues partially without producing anæsthesia. If the patient is awake, the surgeon will be informed at once.

Under chloroform and ether the patient remains quiet in spite of the most painful manipulations, so one would never know, when local anæsthesia were employed in conjunction with these general anæsthetics, whether it was accomplishing its object.

Nitrous oxide and oxygen has therefore a double advantage over ether and chloroform: it is less toxic, and the general anæsthesia is so light that painful manipulations excite reflexes. The patients move, muscles contract, so that under this general anæsthesia one has almost as good an index of the efficacy of one's local infiltrations as when the patient is awake.

The nitrous oxide and oxygen therefore obliterates psychic shock and produces no toxic shock. The local anæsthesia obliterates the traumatic shock.

From the author's observations, extending now over a period of more than three years, he has become convinced that the best index to the patient's condition before, during, and after operation is the behavior of the blood pressure. During a successful operation under local anæsthesia, with or without nitrous oxide and oxygen, the blood pressure remains more or less uniform. Sudden rises in the blood pressure indicate painful manipulations. When continued, these manipulations are followed by a fall of the blood pressure. This means shock. When earlier in the operation these painful manipulations are followed by a fall of the blood pressure, the surgeon knows that his patient is in poor condition to withstand further traumatic shock.

Successfully employed, the combination of nitrous oxide and oxygen with local anæsthesia will reduce the mortality in all these operations in which the mortality is due to shock. The author is confident of this. In all cases it will diminish the post-operative complications and discomforts and shorten the period of disability. These statements are based upon a large number of cases, but chiefly upon an observation of fifty resections of the colon. In ten cases there was, in addition, an operation upon the stomach: 8 resections, 2 pyloroplasties. All of these patients are bad operative risks. There was not a single death from shock, although the average time of operation was at least three hours. There were three deaths: one from acidosis present before operation, not relieved by operation; one from thrombosis and embolism; one from a late intestinal obstruction. In the majority of these cases the convalescence after operation was less trying to the patient than after an ordinary quick appendectomy under ether narcosis and not combined with local anæsthesia.

The author would not dare to attempt the resection of the colon under the older methods of anæsthesia combined with the most rapid operation, but without local anæsthesia.

SURGERY OF THE HEAD AND NECK

HEAD

Alessandri and Chiavaro: Resection of Three-fourths of the Lower Jaw by the Buccal Route and a New Method for Mandibular Prosthesis (Résection des trois quarts de la mâchoire inférieure par voie buccale et nouvelle méthode de prothèse mandibulaire définitive). *Policlin.*, Roma, 1913, xx, 49.
By Journal de Chirurgie.

A young girl, 18 years old, had noticed three years previously a tumor in the right half of the lower jaw. It was operated upon and she was told that it contained three teeth. After the operation the tumor of the bone persisted and grew in size, causing a fleshy swelling on the gum.

On examination of the face it was found to be greatly deformed by a swelling in the lower part of the right cheek. The tumor, which was the size of an orange, was irregularly ovoid in shape, with its long axis directed backward and to the left; it presented a smooth surface.

Operation: Two small incisions were made, one in the left submental region and one behind the right ascending branch about half way up. Alessandri cut the bone at these two points with a Gigli saw, thus separating the whole of the diseased portion of the bone from the horizontal part on the left side to the vertical part on the right. He then rapidly removed the fragment by an incision in the gum anteriorly and in the buccal floor posteriorly with cutting of the muscular attachments; packing and partial closure of the incision in the mucosa. Chiavaro's apparatus for prosthesis was used. Five weeks later some adhesions between the tongue and the floor of the mouth were cut. One month and one-half later the wound had healed completely and the apparatus was firmly in place. The cure has been permanent and the result excellent both from an æsthetic and a functional point of view.

The fragment removed consisted of the whole of the right horizontal part and 2 cm. of the left, the right angle and 2 cm. of the right ascending portion. There was normal bone at the two ends from the angle up on the right and from the symphysis on the left. The intervening portion was deformed by a tumor which had enlarged the bone, especially in front, where a great part of the cortex was destroyed and there appeared a fleshy mass which was partly broken down and contained regions infiltrated with blood.

Histologically it was a mixed sarcoma with a predominance of spindle cells and many giant cells.

This was the second case in which Alessandri had performed a resection of the lower jaw for periosteal sarcoma and used Chiavaro's apparatus. The result in the first case was good as here, though a recurrence necessitated his doing the operation by the external route.

He insists that it is better to perform more or less

complete resections or disarticulations of the jaw by the intrabuccal method, though it is more difficult. Not only does one thus avoid a disfiguring scar but also this method is almost essential for the application of the prothetic apparatus of Chiavaro.

In the second part of the paper, which has many illustrations, Chiavaro describes the technique which he used in this case in the construction and application of the apparatus for prosthesis. He then outlines his experiences with heavy prothetic apparatus, temporary or permanent, and points the advantages of his over other methods, especially those of Martin, and ends with the following conclusions:

Immediate temporary suppression of the apparatus for prosthesis with rubber which does not offer sufficient resistance to the cicatricial contraction of the soft parts permits it to be raised up by the floor of the mouth against the remnants of bone, where it causes pressure ulcers to form and in each of which cases it is necessary to replace the apparatus properly. Suppression of the wings is maintained after the application of a heavy permanent prothetic apparatus. A serious defect in mastication as the lateral movements of the jaw are inhibited follows when these are used.

The weight and shape of the apparatus prevents the cicatricial contractions of the soft parts and serves to suppress the tendency to fixation which renders mastication and pronunciation difficult and starts irritation and inflammation of the tissues.

In case of disarticulation of the lower jaw the use of heavy prothetic apparatus has the following advantages:

Suppression of the ascending branches of the apparatus which are the cause of painful irritation of the articular surfaces at the base of the skull on account of the constant cicatricial retraction of the roof of the mouth.

Suppression of the palatine plate, for the heavy apparatus remains in place on account of its weight and special form.

A. BASSET.

Hudson: Sub-Temporal Muscle Drainage by the Aid of Silver Wire Drainage Mats in Cases of Congenital Hydrocephalus. *Ann. Surg.*, Phila., 913, lvii, 338.
By Surg., Gynec. & Obst.

This paper has to do with a description of the technique of the operation as elaborated by the author.

An incision is made posterior and above the right ear, down to the temporal muscle. The muscle is then freed from its attachment to the bone and the skull and dura opened. A long puncturing tube is then inserted into the brain until the cerebrospinal fluid flows from the open end. A permanent drainage tube is then inserted over the puncture tube and its outer end is connected to a silver drainage

mat. This mat was previously fixed under the temporal muscle as soon as it was freed from the skull. The muscle is now carefully sutured in place with the finest black silk and the scalp closed with the same material.

The operation must be carried out under absolutely aseptic conditions. Several illustrations are given in the article showing the mats and tubes used in the operation.

JAMES H. SKILES.

Cushing: Concerning the Symptomatic Differentiation between Disorders of the Two Lobes of the Pituitary Body with Notes on a Syndrome Accredited to Hyperplasia of the Anterior and Secretory Stasis or Insufficiency of the Posterior Lobe. *Am. J. M. Sc.*, 1913, cxlv, 313.
By Surg., Gynec. & Obst.

The author assumes that every gland of internal secretion has a definite clinical picture associated with a diminution or absence of its secretion and on the other hand that a perversion or excess of the secretion of the gland will give a picture which is exactly opposite. The clinical pictures associated with a diminution or lack of secretion of the various glands of internal secretion have been pretty well worked out; e.g., in the case of the adrenal and the associated Addison's disease; thyroid insufficiency, giving the clinical picture of myxœdema; parathyroid insufficiency, giving the picture of tetany; insufficiency of the islands of Langerhans giving the condition of diabetes; and mutilating operations on the generative organs have given many opportunities to observe the effect produced by eliminating the internal secretions from these organs.

The hypophysis has been considered, until very recently, as a whole. But further experimental and clinical evidence has shown that the gland has a dualistic nature and that the functions of the two parts are very different. The neuro-epithelial portion, the posterior lobe, discharges its secretion into the cerebro-spinal fluid, therefore this part of the body is a gland of external secretion, since it does not discharge directly into the blood. The strictly epithelial portion, the anterior lobe, is a typical gland of internal secretion, as it discharges its secretions directly into the blood stream.

The anterior lobe elaborates a harmony which stimulates growth and is chiefly related to factors of skeletal development. An excess of the secretion from the anterior lobe produces the clinical picture of acromegaly. The posterior lobe has to do especially with metabolic processes and especially with the assimilation of carbohydrates. A deficiency of its secretion leads to a noticeable increase in the tolerance for sugars with associated tendency to adiposity, a subnormal temperature, somnolence, a dry skin, polydipsia, and polyuria, loss of hair, characteristic psychic, often epileptiform, disturbances, etc.,—a sort of pituitary myxœdema, as it were. An excess of posterior lobe secretion, on the other hand, causes tissue waste with loss of flesh, a relative intolerance for carbohydrates, often with

spontaneous glycosuria, a moist skin, etc., symptoms the reverse of the above. Moreover, secondary symptoms referable to other glands of internal secretion occur, especially in reference to the generative organs. Apparently there is an increased activity on the part of the generative organs when there is hypophyseal hyperplasia and there is undoubtedly a decrease, even lack of development or atrophy, when there is a hypoplasia of the hypophysis. As to which lobe this phenomenon is due there is a question but the author inclines toward the belief that it is due to changes occurring in the posterior lobe. Furthermore, there may be clinical pictures which seem to be due to an increased secretion from one part of the gland and a decreased secretion from the other.

The acromegalic syndrome shows the picture of gigantism, if the hyperplasia takes place before epiphyseal union, or as more or less acromegalic changes if after epiphyseal union. In all but three of a series of fourteen cases coming under the author's care, there were signs not only of an increased anterior lobe secretion but a decreased posterior lobe secretion. These latter were: increased adiposity, marked increase in tolerance for carbohydrates, tendency toward somnolence, subnormal temperature, anaphrodisia. On the other hand, in the early stages of acromegaly there is apt to be the reverse picture namely, defective metabolism, spontaneous glycosuria, loss of flesh, etc.

In the syndrome of dystrophia adiposogenitalis the picture is due to a hyposecretion of both the anterior and posterior lobes. There is imperfect skeletal formation if the condition has come on early in life, and the associated symptoms referable to the posterior lobe, such as increased adiposity, defective development of the generative organs, somnolence, increased sugar tolerance, etc.

The syndrome of overgrowth with adiposity is supposed, by the author, to be due to an increased secretion of the anterior lobe and a decreased secretion of the posterior. Three recent cases coming under the author's notice are cited. These cases all showed enormous skeletal development for their ages and marked adiposity. They all showed lowered mental activity, two showed very high sugar tolerance and the other could not be tested as regards this point, as quantities over 150 grams could not be retained. Several showed nervous symptoms, one being an epileptic. They all showed lessened sexual activity. One showed general increased cranial pressure phenomena.

JAMES H. SKILES.

Frazier: The Pituitary Body in Disease; the Method and the Results of Surgical Intervention. *Penn. M. J.*, 1913, xvi, 421.

By Surg., Gynec. & Obst.

Though the surgery of the hypophysis is a development of comparatively recent years, Frazier feels the results have been sufficiently gratifying at least to offer a promising field and to assure a measure of

relief for otherwise incurable conditions. The anatomist, physiochemist, and surgeon have all been working to solve the various problems connected with pituitary disorders, and two distinct schools have arisen — one claiming that it is merely a rudimentary organ, and the other that life cannot continue when the gland ceases to functionate. It has been proved conclusively, however, that certain very serious disorders have a very direct relation to either a neoplasm or a non-neoplastic enlargement of the pituitary body. If the services of the surgeon are to be of any avail, it is very necessary that the symptoms of these disorders be recognized early. The author describes briefly the three general groups into which they may be divided, and cites cases of his own for illustration. The first two groups, caused by hyper and hyposecretion of the gland respectively, take the form of acromegaly and dystrophia adiposo-genitalis; the third type may be seen alone, or in combination with one or the other of these — a type in which the symptoms are the expression of pressure upon adjacent structures or of increased intracranial pressure. In this latter group, when there is no demonstration of metabolic disturbances, the author lays emphasis on the headache, nausea, and dizziness. There are also not infrequently psychic disturbances, ranging all the way from somnolence and listlessness to well defined insanity. The most constant of this group of symptoms, however, are those which result from injury to the optic tracts, causing bilateral temporal hemianopsia. The importance of the X-ray as an aid in diagnosis must not be lost sight of.

Frazier: An Approach to the Hypophysis Through the Anterior Cranial Fossa. *Ann. Surg. Phila.*, 1913, lvii, 145. By Surg., Gynec. & Obst.

While thus far, in the majority of instances, the hypophysis has been approached extracranially by the transphenoidal route, the author feels that in the future the intracranial method through the anterior cranial fossa will be the procedure of choice, as by the latter route the avenue of approach is wider and the danger of infection lessened. The method which he now uses makes the exposure of the pituitary body as devoid of serious difficulties as that of any other basal structure. The operation consists essentially in the reflection of an osteoplastic flap from the right frontal region in the removal *en bloc* of the supra-orbital ridge, as suggested by McArthur, with a portion of the roof of the orbit, later to be replaced, and in rongeur away what remains of the roof of the orbit down to the optic foramen. With suitable retractors, the orbital contents are displaced downwards and outwards, and the frontal lobe elevated until a view is obtained of the optic nerve. He then makes a short incision in the dura and thus lays bare the cavity of the sella turcica. The remainder of the operation depends upon the character of the lesion to be dealt with.

As an example, Frazier cites the following case in which he found and evacuated a cyst of the hy-

pophysis: The patient, a young man of twenty-three, had been a normal child up to the age of fourteen, when he was struck with a rock over the right temporal region. Two years later, he grew perceptibly weaker, his weight began constantly to increase, and he was gradually losing the sight of his right eye. When he first came under the author's observation in July, 1912, his appearance was that of a thick-set boy of fifteen or sixteen, with very marked panniculus adiposus. The genitalia — infantile in type — suggested a child of ten or twelve. He suffered from severe headaches, and the ocular disturbances had advanced to a state of complete right temporal hemianopsia. Aside from these marked glandular symptoms, the X-ray findings were very suggestive of pituitary trouble.

Under intratracheal anæsthesia, Frazier carried out the operation as described above. As soon as the anterior clinoid process was reached, he made a transverse incision, two centimeters long, in the dura, across from one anterior clinoid process to the other and about a centimeter above the base of the skull, and by displacing the orbital contents with a retractor there was seen between the optic tracts what afterward proved to be a cyst of the hypophysis.

Frazier strongly recommends the intracranial route in all cases, and feels that it is positively indicated in cases where the orifice of the sella is enlarged and where there is reason to believe the tumor extends beyond the confines of the sella and is encroaching upon the brain. He has used this method in the last four hypophyseal cases with eminent satisfaction.

NECK

Wenglowski: Neck Fistulas and Cysts (Über Halsfisteln und Cysten). *Arch. f. klin. Chir.*, 1913, c, 789.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of his studies on human embryos, which have been described in detail, Wenglowski turns against the universally accepted theory of the origin of lateral neck fistulas and cysts from the second gill cleft and pharyngeal pouch. As the main proof of this theory stands the course of the fistulas under the N. glossopharyngeus. But in most cases, any closer relation between the two structures is lacking. In the first place, a series of further anatomical facts argue against the theory. The fistulas are usually so situated in relation to the M. stylopharyngeus (which goes to make up the body of the third gill arch) that they are below the muscle, and usually open to the exterior on its posterior margin. The fistulas would then belong to the third, and not to the second gill slit. In the second place, the explanation of the fact that many fistulas are covered with pavement epithelium offers many difficulties. The pavement epithelium is supposed to belong to the pharyngeal pouch, and the flat epithelium to the gill cleft. There are, however, externally incomplete fistulas with pavement epithelium, and internal

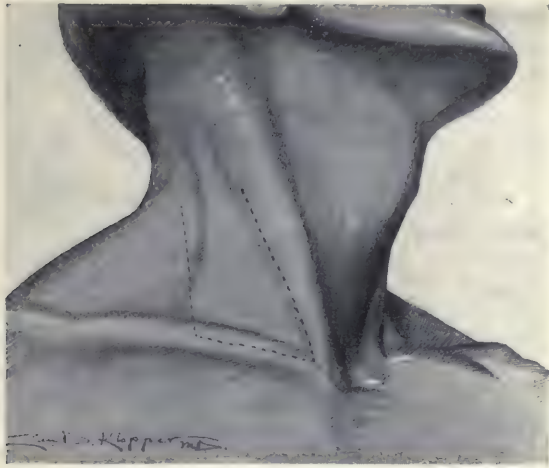


Fig. 1. (McKenna.)

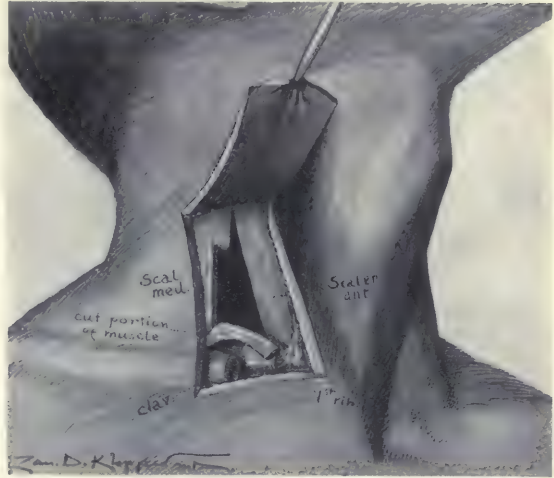


Fig. 2. (McKenna.)

fistulous tracts with flat epithelium. There is little likelihood that, for example, the arch of the pharyngeal pouch should reach down to the incisura sterni, while the gill arch, between which the pouch is situated, should retain its position unchanged. In the third place, the inner opening of the fistulas usually lies behind the pharyngeal arch, or in the lower posterior corner of the mandelbucht, and hence in the domain of the third, and not of the second pharyngeal pouch. In the fourth place, the direction of the course of the fistulas and their position with relation to the external carotid does not correspond to an origin from the second pharyngeal pouch and gill cleft.

The author now proposes the theory that the lateral neck fistulas and cysts arise in the "Thymusanlage." The thymus arises from the third pharyngeal pouch in the form of a long canal which runs diagonally from the lateral wall of the pharynx to the sternum, where it develops the actual thymus body. The course and the anatomical structure of this canal correspond exactly to what has been found in the cases of neck fistulas and cysts. Aside from this course, in certain cases a second embryonal tube comes into consideration, which corresponds to the lateral thyroid gland anlage. The internal opening of fistulas of this latter origin is characterized by its position lateral to the laryngeal opening.

WREDE.

Dowd: Hygroma Cysticum Colli: Its Structure and Etiology. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Scattered references to hygromas of the neck are found in surgical and pathological literature, but the cases are so uncommon that few definite descriptions have been recorded. A tabulated description of ninety-one cases of hygroma in the neck, thirty-five in the axilla, and eleven in other parts of the body is

given; many of the descriptions are incomplete. The term should be applied to cystic tumors which are lined with endothelium and which have marked individual power of growth. They are distinct from branchial cysts, thyroglossal cysts, tumors of the carotid body and lymphosarcoma. The demarcation from lymphangioma need not be absolutely definite.

The author described three cases of undoubted hygroma of the neck and a fourth case which was believed to be hygroma but in which inflammation had obliterated the finer structure of the cyst wall. All the cysts had been present from birth but had shown sudden and excessive power of growth. In one instance the cyst had extended into the mediastinum; in another, into the pectoral region. One cyst had recurred very rapidly after removal of all visible parts. Silver-stained sections of the endothelium were shown, also photographs of the patients and microphotographs of the cyst walls.

These growths are believed to be due to growth of embryonic sequestrations of lymphatic tissue.

McKenna: A Report on Two Cases of Cervical Rib and an Operative Measure to Prevent Recurrence of Symptoms. *Surg., Gynec. & Obst.*, 1913, xvi, 322. By Surg., Gynec. & Obst.

A review of the literature on neuritis of the upper extremities convinces one of the fact that until recently many cases of supernumerary or cervical rib passed unrecognized.

For a number of centuries, anatomists have recognized extra cervical ribs, but this anomalous condition was not associated with the clinical phase which we now know these ribs produce.

The author believes the complete and permanent success of the operation for the removal of a cervical rib depends principally upon two points in technique: (1) An incision that gives easy access to the

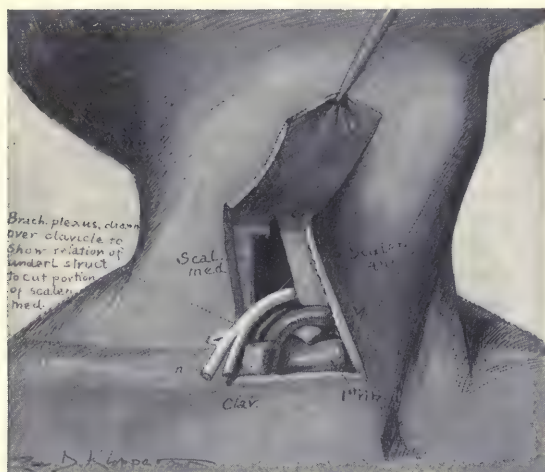


Fig. 3. (McKenna.)

rib, so that it may be removed entirely with a minimum amount of trauma to the brachial plexus and subclavian vessels; (2) the proper protection of the plexus and vessels from the upper surface of the first dorsal rib, which has been denuded of its periosteum by the removal of the osseous attachment of the distal end of the offending cervical rib.

In the author's plan of operation, an incision is made from a point midway between the origin and insertion of the sterno-cleido-mastoid muscle and along its posterior border in a straight line to the lower border of the clavicle. A second incision is made parallel to the first, and two inches posteriorly from the anterior edge of the trapezius muscle, to a corresponding point on the clavicle. These two incisions are now connected by a third incision, carried over the clavicle.

McKenna employs a portion of the scalenus medius muscle to cover the upper surface of the denuded first rib, thereby forming a cushion for the brachial plexus and subclavian vessels.

Henderson: Cervical Rib; Report of 31 Cases. *Tr. Am. Orthop. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The deformity is usually bilateral. Of thirty-one cases observed in the Mayo Clinic there were twenty-four bilateral. All the cases in this group in which there was undoubted elongation of the costal process on each side of the seventh cervical vertebra beyond the tip of the transverse process of the first dorsal vertebra were classified as bilateral. Nine of the twenty-four were well developed bilateral cervical ribs, ten were rudimentary bilateral cervical ribs and three had a well developed rib on the right side with an accompanying rudimentary rib on the left. Two cases had a well developed cervical rib on the left side with an accompanying rudimentary on the right. None of the males presented well developed bilateral cervical ribs, while

of the ten presenting bilateral rudimentary ribs six were males. There were five patients with well developed left cervical ribs, the right being absent, whereas there was only one developed on the right side alone. Of the nine well developed bilateral cervical ribs only two caused subjective symptoms and but one was operated on. In this case the left rib, which was the larger, was removed. The entire nine objectively presented tumors of varying sizes in the supraclavicular fossa. Of the ten bilateral rudimentary ribs three patients had subjective symptoms; in one of these patients the rib was removed. For some reason unexplained cervical ribs are more common in women—twenty-two females and nine males in this group. In literature on the subject the percentage is usually rated as 70 per cent of females and 30 per cent of males.

Of the thirty-one cases, there were eighteen who gave no subjective symptoms. Of these eighteen there were seven who displayed a fullness in the supraclavicular fossa. In eleven no fullness was detected on routine physical examination. These eleven were subjected to X-ray examination of the chest for some other reason and the cervical ribs discovered accidentally. Six cases gave symptoms subjectively and objectively, but were not operated on. Seven cases were operated on (five females and two males). Excision was made in six cases and an alcohol injection and cautery to the neck in a neurotic man. All were completely relieved except two neurotic women and these are greatly relieved and satisfied with the result. Various theories are advanced to account for the fact that some individuals with cervical ribs have no symptoms, whereas others have, this regardless of the size of the ribs. Jones accounts for it from an anatomical point of view by saying that an individual might have the normal number of ribs but the nerve roots make their point of exit a little low and the first dorsal rib a little high. The result would be pressure on the nerves and a brachial neuritis. Various degrees of this condition might be present. In certain cases the cervical ribs do not give symptoms and here again the nerve roots may make their exit high and so escape pressure. If their exit be low or normal, pain will ensue.

The author takes up the symptomatology and reports the thirty-one cases in detail. The conclusions are as follows:

1. Cervical ribs are congenital deformities rarely causing symptoms until adolescence or later.
2. The deformity is usually bilateral (twenty-four out of thirty-one cases) and is more common in women than in men (twenty-two females and nine males).
3. The size of the cervical rib is not the index to the symptoms.
4. It is estimated that only 10 per cent of cervical ribs cause symptoms. Out of the thirty-one cases in this report, eighteen gave no symptoms.
5. Brachial neuritis may be caused by cervical ribs. This neuritis may be caused by a lack of

harmony (embryologically) between the first dorsal rib and the site of exit of the roots of the nerves. The roots of the nerves may have their exit low and be subjected to pressure by a normal first dorsal rib or they may have a normal position and the first rib be high. We have had one case of brachial neuritis associated with tuberculous glands of the neck when during the course of the removal of the glands the first rib was seen to be high and to impinge on the nerves. It was removed with complete relief from symptoms.

6. The theory of the difference in the site of exit of the nerve roots may explain the lack of symptoms in certain patients having well developed cervical ribs, whereas other patients with smaller cervical ribs give pronounced symptoms.

Crowther: Aberrant Goiter of the Submaxillary Space (Sur un cas de goître aberrant de la loge sous-maxillaire). *Riforma med.*, 1913, xxix, 232.
By Journal de Chirurgie.

The submaxillary space is rarely the site of tumors of thyroïdal nature. Only nine cases appear in the literature. Those of Eiselberg, Payre and Martina, who have two cases each; Socin, Lenzi, Reich, Heynier, Feldmann, each of whom have reported one case. The author reports a tenth case under the following conditions: The patient was a woman 45 years of age. At the age of 32, following an attack of angina, she stated that a circumscribed tumefaction appeared in the right submaxillary space. At that time the tumor was round, mobile, and the size of a small nut. During the last three years it attained the size of a mandarin. It lay at the horizontal ramus of the maxillary bone and reached to its angle. In front it reached the median line of the neck, and below it extended to the hyoid bone. The skin which covered it was freely movable. The tumor was non-painful, elastic, and of a cartilaginous hardness at its posterior pole. It was mobile and attached only at the borders of the submaxillary space. It was not evident on the floor of the mouth, but by combined palpation one could feel it in this place. The left side of the space and the rest of the neck was normal. The right lobe and the isthmus of the thyroid gland were palpable and slightly enlarged. A diagnosis of mixed tumor of the maxillary gland was made and the patient operated. On opening the space this gland was found to be normal and lying below and behind the tumor; the latter was found to be enveloped in a very vascular capsule and to be covered anteriorly and above by the great hypoglossus. It was easily enucleated since only a vascular pedicle attached it to the surrounding tissue.

This tumor was of a brownish-red color with a smooth surface covered by several deep furrows. On its posterior aspect a yellowish-white nodule of cartilaginous consistency was present. The cut surface showed a number of cysts of various size. The hardest part of the tumor seemed to be composed of a calcified fibrous tissue. Histologically,

areas of normal thyroid structure with cavities lined with regular cuboidal epithelium filled with colloidal substance were present. At other points tissue like that of cystic goiter was present.

Clinically, the tumor was very difficult to diagnose. In one case only, that of Lenzi, could a diagnosis be made before operation; but in this case the tumor was only secondarily in the submaxillary space. It occupied the greater part of the median subhyoid region and accompanied a tumor at the base of the tongue.

In the author's case there was not a trace of extension of the thyroid from its normal locality. In cases of this variety, and they are numerous, it is not uncommon to see myxœdema appear after removal.

AMEUILLE.

Wilson: The Pathology of the Thyroid Gland in Exophthalmic Goiter. *Tr. Ass. Am. Physicians*, 1913, May.
By Surg., Gynec. & Obst.

Wilson, continuing his previously reported studies on the thyroid, has recently reviewed the pathology of the thyroids from 1208 patients operated on in the Mayo Clinic for conditions ordinarily diagnosed exophthalmic goiter, from January 1, 1905, to January 1, 1913, and also as controls of the thyroids from 585 patients operated on in the same clinic for conditions ordinarily diagnosed simple goiter, during the year 1912. Besides studying the gross specimens, he has made a detailed analysis of the histology of the glands in fixed tissues and tabulated and summarized the results of his study to determine the relationship of the pathology of the thyroid to the clinical condition of the patient. His conclusions are as follows:

1. A detailed pathologic study of fixed-tissue preparations from 1208 thyroids, removed from patients whose condition would ordinarily have been diagnosed exophthalmic goiter, showed that 79 per cent of the thyroids contained large areas of marked primary hypertrophy and hyperplasia. A parallel clinical study has shown that for a period of three years all cases with true exophthalmic goiter, and from whom gland tissue was removed, fall into this list.

2. In the above series of 1208 so-called "exophthalmic goiters" plus 585 so-called "simple goiters" or a total of 1793 thyroids, but four instances of marked primary hypertrophy and hyperplasia of the parenchyma have been noted in cases which did not show clinical symptoms of true exophthalmic goiter. Three of these four patients were children.

3. Twenty-one per cent of the 1208 glands studied were either regenerations or adenomata. Clinically, while all of these were markedly toxic, all were chronic and none of them would now be grouped clinically as true exophthalmic goiter.

4. By assuming that the symptoms of true exophthalmic goiter are the results of an excretion from the thyroid gland and by attempting to determine the amount of such excretion from the pathologic data, one is able to estimate in a large series of cases

the clinical stage of the disease with about 80 per cent of accuracy, and the clinical severity of the disease with about 75 per cent of accuracy.

5. It would therefore appear that the relationship of primary hypertrophy and hyperplasia of the parenchyma of the thyroid gland to true exophthalmic goiter is as direct and as constant as is primary inflammation of the kidney to the symptoms of true Bright's disease.

Jacobson: The Thyrogenic Origin of Basedow's Disease. *Ann. Surg.*, Phila., 1913, lvii, 341.

By Surg., Gynec. & Obst.

A review of the literature is presented to contrast the theories of hyperthyroidism and dysthyroidism as causative factors in Basedow's disease, based on experimental and clinical observations.

Marine and Lenhart have come to the conclusion that the involvement of the gland is only a part of a general disease and is therefore only symptomatic and that its enlargement is compensatory depending on functional insufficiency. Carlson is inclined to regard the thyroid structural changes in Basedow's disease as an evidence of altered secretion rather than increased secretion. Klose regards the condition as a dysthyroidism, as the injection of extracted juices of Basedow goiters into animals produced

symptoms of the disease. He found that intravenous injection of potassium iodide in dogs produced a similar reaction. Bircher believes that the thymus gland plays an important rôle in relation to Basedow's disease, as implantation of thymus gland intraperitoneally caused typical Basedow symptoms — Garre, Copelle and others suggested this work by reporting the clinical improvement in Basedow following thymectomy. Baruch caused experimental Basedow's disease by injection of an emulsion of ordinary colloid or parenchymatous goiter. The author calls attention to the well-known artificial production of Basedow's disease by iodine or thyroid extract, extract indication in certain cases, and cites Von Notthoft's interesting case. Viewed from a pathological standpoint every case of Basedow's disease is accompanied by an enlargement of the thyroid gland. From the microscopic anatomic viewpoint, Kocher, Wilson and McCarthy and others have described typical histological pictures which are characteristic of definite stages of the disease. The appearance of Basedow's symptoms in presence of tumors or inflammation of the thyroid speak strongly for the thyrogenic origin of the disease, as do the results of treatment of the disease by surgical interference where there is a percentage of cure varying from 65 to 75 per cent. V. C. DAVID.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Gussew: A Case of Hypertrophy of the Mammary Glands (Ein Fall von Hypertrophie der Brustdrüsen). *Gynäk. Rundschau*, 1913, vii, 131.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This anomaly of the breasts is hardly mentioned in the text books. It is usually divided into two groups: (1) the permanent hypertrophy appearing with puberty. (2) the periodic hypertrophy which occurs during pregnancy and disappears during the first months after labor. The author cites a case.

The patient, 25 years old, had an extreme hypertrophy of the breasts, especially the left one which was hung down to the navel. Circumference of the left breast in the middle was 52 cm., length from the fourth rib to the apex was 26 cm. Circumference of the right breast in the middle was 46 cm., length 21 cm. The breasts were very much enlarged at the beginning of the first menstruation and had not increased in size during the last ten years or during the pregnancy. Milk was secreted in small amounts. The breasts never interfered with daily work. She refused every treatment.

R. CHAPUIS.

Deaver: Review of 534 Operations on the Mammary Gland. *J. Am. M. Ass.*, 1913, lx, 795.

By Surg., Gynec. & Obst.

Deaver discusses the problem of mammary tumors, especially from the standpoint of prognosis,

basing his opinions on a statistical study of 534 operations on the breast. The author draws a parallel between the reduction of the primary operative mortality from 25 per cent to 1 per cent with the introduction of asepsis and antisepsis, and the reduction of the percentage of local recurrences from 65.5 per cent to 6 per cent with the general adoption of the Halsted principles of extensive dissection. Notwithstanding this, he sounds a pessimistic note in the modern operative results, and firmly establishes this on the ground of late operative interference. Of the last 200 operative cases of cancer of the breast admitted to the wards of the German Hospital, 31 had extensive ulceration and metastasis; and the after results confirm the observations of others that these conditions bespeak the hopelessness of surgical cure. The average length of time the disease had existed, as estimated from the time of appearance of the first signs of trouble with the breast, was thirty months. In the cases in which the patients were well three or more years after radical treatment, sixteen months had elapsed on the average before operation.

Alterations in the normal fibro-epithelial relationship, of bacterial, traumatic, involutionary or other cause, is almost invariably the precursor of malignancy, and it is only at this stage that the success of an operation is assured, for with the intervention of malignancy, in no case can the limitations of the disease be foretold. As regards diagnosis, the author

says: "When a positive diagnosis of mammary carcinoma can be made, the hope of operative cure is often in vain, for the classical signs are usually unmistakable evidence of extensive metastasis." A table of the physical signs in this series follows, and the possibility of cure based on these findings is indicated in a table taken from Greenough's studies. Of the author's patients well three or more years after operation, only 12 per cent had had retraction of the nipple and 18 per cent attachment of the tumor to the skin, but in no instance was the tumor attached to the pectoral fascia. Of 59 cases dying of early recurrence, 90.9 per cent had palpable axillary lymph node involvement. Of 16 cases living after the three-year limit, 25 per cent had palpable lymph nodes in the axilla.

The initial symptom in 78 per cent of the malignant cases and in 86 per cent of the benign cases was a lump, causing as a rule no discomfort, and usually discovered accidentally. Pain was frequently complained of in the late stages of the disease but occurred in only 9 per cent of the cases as the initial symptom. The location of the various types of tumors is graphically shown, with the majority involving the upper-outer quadrant. Axillary lymph nodes palpably enlarged in the presence of a mammary growth are not absolute evidences of metastasis. This condition complicated 4.5 per cent of the benign cases in which microscopic study showed the absence of malignancy both in the tumor and in the glands. The microscope proved, furthermore, the absence of metastasis in 6.5 per cent of the 37 per cent of malignant cases in which axillary enlargement was noted on palpation, although in 62 per cent of the cases in which no mention is made of involved axillary nodes, metastasis was found microscopically. The author advises complete removal of the pectoral muscles and fascia, together with the axillary tissues, and considers in this connection the various routes of carcinomatous extension from the breast. He advocates removal of those digitations of the serratus magnus muscle arising from the fifth and sixth ribs when the tumor occupies the lower outer quadrant of the breast. The primary operative mortality in the series was .056 per cent. Endocarditis fatally complicated a simple excision of a small benign tumor; the remaining two fatal cases died of uræmia and pneumonia respectively, after the radical operation for carcinoma. The end results in 119 cases were as follows: Of the patients with fibro-epithelial tumors, 44 have been traced, and of these 41 have remained well for an average period of six years; 2 patients have had operations for similar tumors in the opposite breast, and one case diagnosed as fibroadenoma both clinically and microscopically had early malignant degeneration of the breast and died of recurrence after radical operation. Sixteen out of 75 cases of carcinoma, or 21.3 per cent, have passed the three-year limit and are free of recurrence for an average of 7 years; 37 died of recurrence and 4 from causes other than cancer; 6 others have re-

currence at the present time, while the remaining patients are apparently well, though sufficient time has not elapsed to make this certain. The author concludes that approximately one patient in five is permanently relieved of the disease by radical excision. His attitude is one of disfavor to wider excision than the original Halsted procedure, and he expresses the belief that markedly improved results of operative treatment can alone restore a waning confidence in the surgery of mammary cancer. This desideratum can be attained, he states, when our efforts are directed to an educational campaign that will result in bringing the patients to operation with the disease localized to the primary focus, rather than in the direction of elaboration and extension of the operative procedure. His concluding words are as follows: "When popular opinion demands immediate operation on the discovery of a lump in the breast; when physicians are taught to think of breast tumors in terms of operability, and when misguided humanitarianism no longer prompts the surgeon to attempt injudicious operations, the present lack of faith in the surgery of this disease will give way to a healthy optimism."

Molineux: Cleidoplastic Operation Using the Spina Scapulea (Cleidoplastik aus der Spina scapulae). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 180.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After a short introduction, in which the operating procedures up to the present are mentioned, the author describes a new method for the replacing of a resected clavicle from the spina scapulae, which was used, with good functional results, in two cases. In both cases there was a tumor in the peripheral portion of the clavicle.

Method of operation: An epaulette-shaped incision is made beginning about a hand-breadth away from the spinal column, over the spina scapulae, and extending around the shoulder and below the clavicle, up to the sternum. The clavicle is then freed and resected after severing the muscle insertions. This is followed by a freeing of the M. supra- and infraspinatus, and chiseling off of the spina, which is turned about its acromial end and fastened to the stump of the clavicle by two wire stitches.

The only difficulty presented in either case by the operation was the freeing of the clavicle since in both cases the tumor had surrounded the large vessels.

VON TAPPENHEIMER.

Karajannopoulos: Epithelial Tumors of the Clavicle (Tumeurs épithéliales de la clavicule). *Bull. Ass. franç. pour l'étude de cancer*, 1912, v, 90.
By Journal de Chirurgie.

Karajannopoulos reports a case of an epithelioma of the clavicle probably secondary to one of the digestive tract. The case was in the service of Delbet. There was no autopsy.

The case was that of a woman, 42 years old, who had suffered for one year with a severe pain in the shoulder which was described as rheumatic. On

examination, a round hard tumor was found at the middle third of the right clavicle and two similar tumors at the inner third of this bone. These tumors were painful to touch and were apparently the cause of the spontaneous pain in the shoulder.

There had been several attacks of severe burning sensations and pain in the epigastrium with vomiting. The vomitus was foamy and not discolored and there was no hæmatemesis or tarry stools. There was a diarrhœa.

For two months there were symptoms of pressure on the right brachial plexus, the patient being unable to use the right hand or move the arm across the body. The general health of the patient was affected and she was very emaciated.

Operation: Total extirpation of the right clavicle and the tumor was accomplished with difficulty on account of the tumor's being adherent to the internal jugular, subclavicular and brachiocephalic veins. Normal recovery.

The outer third of the bone was normal. The middle third of the bone was invaded with the neoplasm except on its inferior surface. The inner third was completely destroyed by the tumor.

The neoplasm was firm, homogeneous, gray with brown mottlings. Histologically, it was a branching epithelioma in parts of which the cells were arranged in glands and in other parts there was a diffuse infiltration of the stroma with cancer cells. The cuboid or low cylindrical cells did not stain with mucocarmine. This appeared to be a cancer secondary to a gastric carcinoma but the absence of an autopsy made it impossible to confirm this diagnosis.

Karajannopoulos reports five other cases of carcinoma of the clavicle. Two of these, reported by Delbet, were secondary to malignant tumors of the liver. Two other cases secondary to carcinomas of the thyroid were reported by Legueu and Guibe and Malperine. Finally Estor and Massabran reported a case of a primary cystic teratoma of the clavicle.

Delbet remarks that in the three cases of carcinoma of the clavicle which were secondary to abdominal cancers, two of the liver, one probably of the stomach, the inner part of the right clavicle was always affected. This is probably not a mere coincidence though our knowledge of the blood and lymphatic drainage of the clavicle is not sufficient to explain the phenomenon.

JEAN CLUNET.

Smith: The Congenital Absence of Ribs; Report of Case with Complete Absence of the Left Seventh and Eighth Ribs. *J. Am. M. Ass.*, 1913, lx, 895. By Surg., Gynec. & Obst.

Smith mentions nine cases in the literature showing complete absence of one or more ribs. Few of these cases were subjected to an X-ray or post-mortem examination, so it is possible that non-palpable rudiments of ribs may have been present in some of them. He reports the following case: Female, died on the eighth day. A post mortem showed the cause of death to be pneumonia. The

thorax was normal on the right side. On the left side the 1st, 2d and 3d ribs were normal, except that they seemed jammed together and compressed laterally. The 4th and 5th ribs were fused together. At the costochondral articulation this bony structure became broader and was attached to the sternum by two cartilaginous bands. About 1.5 cm. of the 6th rib attached anteriorly to the same length of cartilage was found in the thoracic vertebral column or sternum. The 7th and 8th ribs and their cartilages were entirely absent. The spinal column was defective on the left side at the level of the 6th and 7th ribs and was covered with smooth pleura at the place where these ribs should normally be attached. The 9th, 10th, 11th and 12th ribs were floating. The xiphoid process was bifid. A slight scoliosis, with convexity to the right, was present. In addition were found: A scaphoid scapula, patent ductus arteriosus, open foramen orale, syphilitic periarteritis in nearly all the viscera and double central canal of spinal cord in the thoracic region. L. G. DWAN.

Brown and Krause: The Uncertainties of the Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax; Report of a Fatal Case, with Autopsy. *Tr. Ass. Am. Physicians*, 1913, May. By Surg., Gynec. & Obst.

The introduction of nitrogen into the pleural cavity, although a simple procedure, is not synonymous with successful treatment by artificial pneumothorax. The authors emphasize the dangers and complications that accompany the treatment and report two fatal cases, with autopsy findings in one.

Pleuritic effusion is the most frequent complication. In about 50 per cent of cases it is demonstrable. Some believe that tubercle bacilli are always found in the effusion but Brown has demonstrated them in two cases only. The authors believe that the chilling of the pleura following collapse of the lung may have something to do with the formation of an effusion. A marked effusion increases the difficulty of collapse therapy. It increases intrapleural tension, glues the surfaces of the pleura together and the lung expands and resists further efforts at collapse.

Empyema may supervene upon an effusion. The authors have had two instances of this. In one case each time pus was withdrawn pus was forced along the track of the needle by the cough and formed what appeared like cold abscesses. Tubercle bacilli were found in this purulent effusion.

Subcutaneous emphysema may cause much discomfort. A patient with a violent cough may force the gas into the subcutaneous or mediastinal tissues, outside the parietal pleura, or into the deep tissues of the neck.

Pleuritic adhesions are frequent. The degree of negative pressure that is registered when the needle is first inserted into the pleural cavity indicates in a general way the extent of the adhesions but tells nothing of their tenacity. The negative pressure is

due to the elastic recoil of the lung and proportionately as it is exerted upon adhesions it is reduced in that part of the pleural cavity that is free.

On account of the adhesions the number of patients suitable for collapse therapy is small. Of twenty-two patients, Brown could produce no collapse in eight; a partial collapse in six, and a complete collapse in eight. Partial collapse may be productive of good results.

Dyspnoea following injection may be due either to quick collapse of the lung or the introduction of too much gas. Withdrawal of the gas may be necessary in some cases.

Pain in the chest from the presence of loosening of adhesions may be very severe and require morphine.

Pleural shock and gas embolism may threaten life. In pleural shock the patient grows pale and faint, vomits, and may lose consciousness. It occurs as the needle passes through the pleura and can be avoided by careful cocaineization. Gas embolism practically never occurs when the injection is made under manometric control.

Disease in the non-collapsed lung may advance and it should be closely watched and the advantage and disadvantage of continuing the compression weighed.

The two deaths among Brown's cases were due in part to spontaneous pneumothorax of the partially collapsed lung.

In one, a woman, aged 40, had bilateral advancing tuberculosis. Collapse of the right lung held the process in abeyance for a while but in a short time the process advanced in the left lung and gas injections were discontinued. Two months later the patient felt a sharp pain in the right lung and became dyspnoeic and cyanotic. A needle was introduced and pressure reduced from +10 to -3 cm. But it quickly rose again and although the process was repeated several times it produced no permanent effect upon the intrapleural tension. The patient died two days later.

The other case was a woman, aged 26, who from March, 1910, had slow but steadily progressing trouble. On admittance to hospital in September, 1910, she had extensive involvement on right and compensatory with fibroid changes in the left. In March, 1911, collapse therapy was begun and kept up until April, 1912. It resulted in a reduced cough and expectoration and lessened temperature, which in December, 1911, reached normal. But the temperature later rose and the weight steadily declined. A change of environment was ordered. She then presented signs of a partial pneumothorax with hippocratic succussion to apex and base. On the left a few râles were present. On June 6th, 150 cc. nitrogen were injected and pressure left at +20. At intervals thereafter 150 to 200 cc. nitrogen were injected and pressure left at +18 to +20. On January 6, 250 cc. were injected (pressure +25), and that night patient complained of sharp pains in right lung and wheezing. Examination showed a snoring rhonchus on the whole side with maximum

intensity in fourth i. s. Amphoric breathing replaced the former distant breathing. Later, 200 cc. of pus were aspirated, which contained large numbers of tubercle bacilli. The patient died February 3.

At autopsy it was found that the right lung was thoroughly collapsed and lay in the vertebral gutter. The thoracic cavity contained 500 cc. of thick, yellowish fluid. Thick, fingerlike bands ran from the collapsed lung to the chest wall in the upper part of the thoracic cavity. On removal, the lung appeared as a shrunken, tough, leathery piece of tissue, covered with an enormously thickened pleura. Lobe distinctions were lost. What was probably the upper lobe was now a cavity. Two slitlike holes communicated with the bottom of the cavity and probably were the points where the pleura was ruptured intra vitam. Section of the lung showed compact tissue of mottled, reddish black appearance. Tubercles were numerous, some undergoing organization and many almost completely healed. Macroscopic examination of part of the lung showed no gross tuberculosis; microscopically, showed almost wholly granulation tissue. There were many microscopic tubercles and much pigment.

The left or uncollapsed lung was voluminous and showed diffuse tuberculous process which differed in age in different parts of the lung, the oldest spots being in the immediate neighborhood of the interlobar fissure. The lung was remarkably free from extraneous pigment.

TRACHEA AND LUNGS

Wolff: Operation for Pulmonary Embolism after Trendelenburg (Operation der Lungenarterienembolie nach Trendelenburg). *München. med. Wchnschr.*, 1913, ix, 781.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient could not be saved, as the heart beat had ceased even before the embolus could be removed. Cardiac massage, artificial respiration, etc., failed. In most of these cases the diagnosis is very difficult. The question of interference will be even more difficult as even serious cases of embolus recover when treated conservatively. Rehn considers it safer to compress the vena cava manually when opening the pulmonary artery than to use elastic constriction, suggested by Trendelenburg, because by the latter method cardiac dilatation is more apt to occur. In all cases developing marked cardiac dilatation after this procedure, the heart will have to be exposed by section of the lower ribs. This will facilitate direct cardiac massage if required later.

RUNGE.

HEART AND VASCULAR SYSTEM

Stewart: Five Cases of Suture of the Heart. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Case 1. Symptoms of acute anæmia and hemopneumothorax. Stab wound of left ventricle, three fourths of an inch long; continuous silk suture.

Ligation of the descending branch of the left coronary artery near its origin. Drainage of the pericardial and pleural cavities. Pyopericardium and pyothorax. Recovery. Death five years later from pulmonary tuberculosis. At autopsy the wall of the left ventricle was the seat of interstitial myocarditis, and in one place near the apex greatly thinned.

Case 2. Symptoms of acute anæmia and hemo-pneumothorax. Stab wound of the left ventricle, half inch long. Continuous silk suture. Suture of the pericardium, drainage of the pleural cavity. Pyothorax. Recovery. Patient still well four years and three months after injury.

Case 3. Symptoms of compression of the heart. Pleura not injured. Stab wound of right auricle, one fourth inch long. Continuous catgut suture. Closure of pericardium. Pleura not opened during operation. Recovery without pyopericardium or pyothorax. Patient well after two years.

Case 4. Symptoms of acute anæmia and hemo-pneumothorax. Stab wound of left ventricle, one inch long. Continuous catgut suture, closure of pericardium, drainage of pleural cavity. Death in forty-one hours. Autopsy: pyothorax, purulent pericarditis, acute infective myocarditis, acute vegetative endocarditis.

Case 5. Symptoms of acute anæmia and hemo-pneumothorax. Stab wound of right ventricle, one half inch long. Continuous catgut suture. Closure of pericardium, drainage of pleural cavity. Death in one hour. Autopsy: wound passed into right ventricle, then through the septum into the left ventricle. Both ventricles were hypertrophied and the mitral valves were badly diseased.

Attention is called to the relatively slow pulse in the author's cases. In three it was 100 or below, in one 108, and only 130 in the case with the highest count. The amount of external bleeding was never more than a trickle. This is accounted for partly by the valvular nature of the wounds. It is impossible with a single thrust of a narrow-bladed knife to create a channel from the skin to the heart that will remain straight. So soon as the patient lies down the skin glides upwards an inch or more and the heart likewise ascends. If the pleural cavity is at the same time opened the heart is displaced farther by the resulting pneumothorax. In addition to the influence of this angulation of the tract in retarding the outward escape of blood, external hæmorrhage is apt to be insignificant because the blood finds one, and usually two, reservoirs, viz., the pericardial and pleural cavities, into which it may flow unhindered. On the other hand, a bleeding intercostal or internal mammary artery unassociated with a wound of the pericardium or pleura may give rise to considerable external hæmorrhage, because, aside from the cellular tissue, there is no place in which the blood can accumulate.

There are no pathognomonic symptoms of a wound of the heart; even hemopericardium may be due to a wound of the pericardium alone or to a wound of one of the heart vessels at the base of

the heart. The diagnosis can be assured only by exploration, which should be done in all cases in which there is the slightest suspicion of a wound of the heart.

In five cases of wound of the pericardium, the author has explored the heart without finding a wound in that organ, although in three cases the pericardium was injured and in one the heart was contused. In two other cases in which a wound of the heart was suspected the wound did not penetrate the thoracic wall.

Technique of operation: Iodine disinfection of the skin, excision of the cutaneous wound, digital exploration. Formation of a chondroplastic flap, the size and shape depending upon the situation of the external wound and the amount of room necessary to expose and suture the wound in the heart. So long as there is a pneumothorax it makes little difference whether this flap is reflected towards the right or the left. If the pleura is intact, however, it should be preserved from injury; this is best done by turning the flap to the left, and pushing back the unopened pleura from the pericardium, as was done in Case 3. Enlargement of the pericardial opening in the axis of the heart, discovery of the wound in the heart by palpation. Inspection in the cases cited above was useless until the bleeding had been controlled temporarily by digital compression and the blood removed by sponging. With the finger on or in the cardiac wound a suture is inserted which is used as a tractor while the rest of the wound is closed. In two cases the wound was approximated with forceps during the suturing; this greatly facilitated the operation, but in one case the pulsations of the heart fell from 108 to 52 and the patient ceased breathing for a short time. A continuous suture is quicker than interrupted sutures, presents fewer knots on the surface of the heart, and less opportunity for leakage between the points of insertion. Catgut is the best material. In one case in which silk was used, a sinus persisted until the silk was discharged. In three instances additional sutures were needed to control the bleeding, once because of spurting from the needle punctures (wound of right auricle), once to tie a large branch of the coronary which ran into the wound, and once to tie the descending branch of the left coronary near its origin, where it had been accidentally wounded by the needle. This case of ligation of the left descending coronary artery is of considerable importance in view of the statements of some physiologists regarding the fatal effect of suspension of its function. The patient recovered and was apparently not inconvenienced by the obliteration of his coronary artery. At the autopsy, however, five years later, it was found that the wall of the left ventricle was the seat of interstitial myocarditis and in one place near the apex greatly thinned. It is recommended that all blood be removed from the pericardial and pleural cavities and that these cavities be closed without drainage. Drainage favors infection. If suppuration occurs later in either of

these cavities a drain can then be inserted. It is recommended also that the Auer-Meltzer insufflation apparatus be used during operation, or if the insufflation apparatus is not at hand that the thorax be closed completely and the air withdrawn from the pleural cavity by aspiration. The only discernible objection to this course is the possibility that distention of or suction upon the lung might renew or increase the bleeding from a wound in the lung. The importance of an air-free pleural cavity, however, cannot be overestimated. The large volume of air in the pleural sac contains a great number of bacteria, and these settle on the pleura and give rise to infection. In a recent case of exploratory thoracotomy for a stab wound of the lung, the wound in the lung and in the thoracic wall were closed, and as much air as possible aspirated from the pleural sac; recovery followed without empyema.

Harrigan: Temporary Arrest of the Heart Beats Following Incision of the Pericardium for Suppurative Pericarditis. *Ann. Surg.*, Phila., 1913, lvii, 367. By Surg., Gynec. & Obst.

Harrigan felt warranted in reporting this case, not only on account of the rarity of an operation for suppurative pericarditis but because the temporary arrest of the heart on incision of the pericardium might have a physiological significance vital to the development of the technique of cardiac surgery.

The condition occurred in a thin, poorly nourished, anæmic child aged 11 years. The purulent pericarditis along with an empyema developed secondary to a subperiosteal abscess of the femur. Symptoms pointing to pericardial effusion led to an aspiration of the pericardial sac. Three ounces of purulent fluid under considerable pressure were withdrawn when flow ceased. Immediate operation was decided upon. Ether-oxygen narcosis was used, and mediastinum opened by resection of $1\frac{1}{2}$ inches of fifth rib. Pericardium was deeply placed and some difficulty was encountered in fixing it previous to making incision. Upon opening the pericardial sac a large quantity of pus was forcibly ejected. The heart, deeply placed within the pericardial sac, lay absolutely motionless. It was not determined whether the heart was in systole or diastole. The duration of the cessation was not timed. When an attempt was made to introduce a gauze drain into the pericardium, the heart began to beat, and within a minute the action became tumultuous. The child survived the operation several days.

The author concluded that it seemed logical to assume that there exists a physiological association between the pericardium and myocardium, and that stimulation the former causes a disturbance in the rhythmic activity of the heart. R. W. McNEALY.

Meyer: The Surgery of the Pulmonary Artery. *Tr. Am. Surg. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The main trunk of the pulmonary artery is easily accessible within the pericard after incision of the

latter and pulling the pulmonary artery plus ascending aorta forward by means of an elastic tube, which was conducted through the transverse sinus of the pericard. Five years ago Trendelenburg recommended the operative removal of pulmonary emboli. He resected the left second rib with the help of a double skin muscle flap formation and thus got sufficient access to the pericard and pulmonary artery. The elastic tube compressing both vessels is held by an assistant, the pulmonary artery is incised, and the emboli are removed with forceps. The vessel wound is then closed by sutures. According to personal communication (December, 1912), Trendelenburg and his assistants have done the operation twelve times. No permanent recovery was seen so far, but the results were encouraging. One patient of Krüger lived four days after the operation and then died of pleuro-pneumonia.

The two arteries cannot be compressed longer than forty-five seconds. Læwen and Sievers of the Leipzig clinic have found that the compression of the two venæ cavæ is better borne, evidently on account of avoiding the distention of the right heart. In doing this, six or eight minutes are at the operator's disposal. The author hopes that the future will see a number of these patients saved by operation.

The second operation considered is the ligation of branches of the pulmonary arteries for bronchiectasis. It was recommended by Sauerbrush and Bruns two years ago. The pathology of the disease and technique of the operation are briefly gone over and the history of three patients given who were operated upon by Meyer in this way. All three recovered and are greatly improved so far. The interruption of the physiologic function of the lobe of the lung produces shrinkage, connective tissue formation, and adhesion between pulmonary and costal pleura. Multiple resection of ribs done at a second stage produces collapse of the lung later on.

At the present time the author has two patients under his care in whom it seems desirable to influence all three lobes of the right lung. A more central ligation of the pulmonary artery seems better for the purpose. Experimental work has been done in this direction. The main trunk of the left and right pulmonary artery can be ligated without harm to the animal. The left branch is nicely accessible within the pericard by reflecting a part of the latter or right outside of the pericard, according to anatomical conditions. Ligation of the right branch is more difficult. According to Meyer's observations, the best procedure is the exposure and ligation of the right pulmonary artery within the pericard between ascending aorta and superior vena cava. Another approach is to the division of the right pulmonary artery through an incision outside of the vena cava superior. The experimental work on this latter approach has not yet been completed. The advisability of ligating the main branch or its divisions is discussed.

If it should be shown that pulmonary shrinkage

and collapse therapy of the lung do not cure or at least greatly improve the trouble, pneumectomy will become the operation of choice, since we have learned to close the bronchus airtight.

Sauerbruch: The Influence of Artificial Paralysis of the Diaphragm upon Pulmonary Diseases; Phrenectomy (Die Beeinflussung von Lungenerkrankungen durch künstliche Lähmung des Zwerghells; Phrenikotomie). *München. med. Wchnschr.*, 1913, lx, 625.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author performed the extrapleural thoracoplastic operation for tuberculosis in fifty-eight cases with only two cases of post-operative pneumonia of the inferior lobe; he describes these as aspiration pneumonias, differing entirely from the views of Wilms. In neither of these cases did he do a preliminary or a simultaneous compression-operation on the inferior lobe of the lung. This fact and the belief that the thoracoplastic measures to be adopted must be extensive, despite the healthy con-

dition of the inferior lobe, led the author back to earlier studies, viz., the attempts to place the diaphragm in the position of its maximal expiratory movement by phrenectomy, in order to produce a position of rest for the lung, with compression and connective tissue proliferation. Bardenheuer did this operation at the suggestion of Stürtz in a case of bronchiectasis. The recently published studies of Schepelmann concerning the artificial paralysis of the diaphragm induced the author to report his not yet completed experiments in five cases, earlier than he had intended. It is not difficult to locate the phrenic nerve by an incision, 10 cm. in length, along the posterior border of the sternocleidomastoid muscle. The nerve is 3 mm. in thickness and is easily found lying on the scalenus anticus muscle. Consequently, the author suggests doing the phrenectomy at the location of the preliminary compression of the inferior lobe of the lung. He also claims the operation to be applicable in cases of bilateral tuberculosis and in bronchiectases.

PLENZ.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Trapl: An Inflammatory Desmoid of the Abdominal Wall (Zánětlivý desmoid stěm břišní). *Čas. lékař. Česk.*, 1913, lii, 236.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

During May, 1912, a subserous myoma was removed from the right side of the fundus uteri of a 35 years old pregnant patient. Recovery was normal, the wounds healing by first intention. The following September the patient was delivered spontaneously and there were no complications. Four weeks after labor the patient had a fever and complained of pain in the lower part of the abdomen; three days later she was admitted to the hospital. Temperature at that time was 38–39.8° C. There was a smooth cicatrix about 15 cm. long in the caecal region as a result of the former laparotomy. A solid non-sensitive tumor was present, extending from the left pelvic region over the median line, up to the scar; this mass was connected with the abdominal wall. Vaginal examination revealed a fluctuating mass connected with the uterus and which extended to and was part of the tumor of the anterior abdominal wall. The vaginal incision resulted in the discharge of serous fluid. After symptomatic treatment extending over a period of seven weeks, the fever abated. When a laparotomy was done, the incision was made parallel to the left side of the tumor. This consisted of inflammatory tissue several centimeters in thickness, growing from the deeper layers of the belly-wall. The upper part was so intimately adherent to a loop of the small intestine that it was found impossible to separate the adhesions by the ordinary methods, hence a partial

resection of a large part of the tumor was done; this disclosed a small abscess in the lower segment of the growth, near the wall of the bladder.

Drainage was established at the lower angle and the abdomen closed. Recovery was uneventful. Several silk ligatures were discharged through the drainage fistula. The microscopic diagnosis was: inflammatory desmoid, chronic granuloma containing tissue striæ. The extirpated tumor belongs to a class of inflammatory neoplasms frequently following hernia operations as described by Schloffer, Haim, Bakes, Ehler, and others. They grow around infected ligatures.

PIETREKOWSKI.

Bonamy: Five Fibromyomata of the Diaphragm Simulating Hydatid Cysts of the Liver; Myomectomy; Cure of the Patient; Presentation of Specimen (Cinq fibromyomes du diaphragme simulant un kyste hydatique du foie; myomectomie; guérison de la malade; présentation des pièces). *Paris chir.*, 1913, iv, 1051.

By Journal de Chirurgie.

A woman, 34 years old, without any personal or family history of interest and with no functional disorder, complained of a mass which extended below the right costal margin and caused pain all over her right side up to the shoulder. The mass was globular, fluctuating, and raised the costal margin below which it extended. A diagnosis of hydatid cyst of the liver was made.

A laparotomy incision was made at the external border of the right rectus muscle. Bonamy found a bluish white mass which he punctured and found to be solid. On further investigation it was found to extend up under the border of the ribs and to be attached to the diaphragm by a pedicle which

penetrated a large gap in the diaphragmatic musculature. By his fingers and a Museux forceps the author was able to enucleate this tumor and four more hard tumors which were embedded in the diaphragm without injuring the diaphragmatic pleura which was exposed. Fear of injuring this caused him to leave a small tumor the size of a nut. The removal of these tumors left a large cavity, limited above by the diaphragm and below by the liver, which was drained and the abdominal incision closed. A normal recovery followed. The specimens examined by Philibert were pure fibromas the largest of which weighed 800 grams and the smallest 70 grams.

J.-L. ROUX BERGER.

Bernstein: Etiology of Hernia (Zur Kasuistik der Hernien). *Arch. f. klin. Chir.*, 1913, c, 1094.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Bernstein examined the entire post-mortem material of the Berliner Anatomischen Anstalt during the winter semester of 1910-1911 and 1911-1912 as regards the formation of hernia, to find support for the theory of Koch, von Bergmann and Waldeyer that every hernia is predisposed to anatomically. The author found 25.8 per cent of 279 bodies to have a hernia or a hernial bud. The frequency of hernia in man in proportion to woman is $2\frac{3}{4}$ to 1. The relationship of multiple hernia to the simple in man is $2\frac{1}{2}$ to 1, in woman $9\frac{1}{2}$ to 1. The theory that the pressure of the abdominal wall causes the hernia is probably overthrown to-day. The explanation that the pressure of the abdominal wall could be aided by poor anchorage and position of the abdominal content is not sufficient support for the production of hernia. Roser suggests that the hernial sac must be considered as primary. The entrance of the intestine follows secondarily. Linhard explains the formation of the hernial sac through a bulging of the peritoneum. He says it is usually a preperitoneal lipoma which is forced outward and pulls the peritoneum after it. The author argues against the theory of Linhard because in the 279 cases he found only six in which there was a preperitoneal lipoma. From the striking frequency of multiple herniæ and buds in the same individual (19.4 per cent of the multiple against 6.4 per cent of the simple hernia) he concludes that the origin of the hernia consists in an anatomical predisposition, which can be traced to processes in developmental history.

KOLB.

Ochsner: The Treatment of Hernia in Children.

J.-Lancet, 1913, xxxiii, 127.

By Surg., Gynec. & Obst.

This paper contains clinical observations on the treatment of hernia in a great number of children, covering a period of 27 years, as well as a study of the available literature.

Based upon these studies and clinical observations the following conclusions are offered:

1. The development of hernia in children is favored by (a) faulty development of the abdominal

wall; (b) insufficient strength in the tissues involved in closing the umbilical, inguinal or femoral openings; (c) abnormal intra-abdominal pressure; (d) unclosed condition of the tunica vaginalis.

2. The causes (a) and (b) are frequently inherited.

3. The abnormal intra-abdominal pressure is due (a) to gaseous distention resulting from improper feeding; (b) to the exertion necessary to evacuate the bladder on account of obstruction due to phimosis; (c) to severe pressure necessary in defecation in case of constipation; (d) to severe, long-continued coughs; (e) to vomiting; (f) rarely to traumatism or overexertion.

4. Approximately 95 per cent of all cases of hernia in children will heal spontaneously if the abnormal intra-abdominal pressure is relieved and the hernial sac is kept empty.

5. This can be accomplished by means of trusses, or much more rapidly in inguinal and femoral hernia by placing the child in bed with the foot of the bed elevated each night for several months from 6 P. M. to 8 A. M.

6. Children with a tendency to the formation of hernia should be guarded against developing coughs.

7. Their diet should be given at regular times and chosen with a view to avoiding gaseous distention.

8. Constipation should be entirely prevented.

9. In case of boys, phimosis should be relieved, if present, by operation.

10. Badly nourished and badly cared for children of the poor should be treated in hospitals by the above method.

11. Operation is indicated (a) in strangulated hernia; (b) in irreducible hernia due to adhesions; (c) in case the opening is unusually large in a free hernia, especially if the condition is hereditary; (d) in reducible hydrocele; (e) in cases with undescended testicle, unless they show a tendency toward spontaneous cure.

12. Except in classes (c) and (e) the operation should consist simply in carefully dissecting out the sac, or in certain cases of inguinal hernia the neck of the sac, ligating it within the abdominal cavity, cutting away the sac, and permitting the stump to retract within the abdominal cavity and closing the skin wound.

13. In class (c) the Ferguson-Andrews operation is indicated.

14. In class (e) the Bevan-Ferguson-Andrews operation is indicated.

15. The recumbent position, with the foot of the bed elevated, is of very great importance in the after treatment of operative cases as well as in non-operative treatment of hernia in children.

16. In young children who will not remain in bed with the foot of the bed elevated, this position can usually be maintained by applying rubber adhesive straps to both lower extremities and having these held in a vertical position by means of weights and pulleys.

17. If the child cannot be kept in this position, a well-fitting truss should be worn night and day until there has been no protrusion for at least six months; at the same time the necessary precautions must be constantly taken to guard against abnormal intra-abdominal pressure from any cause.

18. Only 5 per cent of all cases of hernia in children require surgical treatment.

Haller: Chronic Inflammation of the Omentum in Relation to Chronic Appendicitis and Colitis (Des épiploïtes chroniques en rapport avec l'appendicite et la colite chroniques). Paris: Stienheil, 1912. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Walther first directed attention to chronic inflammation of the omentum in 1898. Largely on the basis of Walther's material, the author now gives a connected presentation of this highly interesting and rare disease. Here belong only the omental inflammations as a sequel to appendicitis and colitis. The colitis may be primary but is usually a sequel of the appendicitis, and especially, again, of the epiploitis. The omental adhesions in the pelvis in consequence of disease in the adnexa, the omental changes in old herniæ, etc., will not be considered. They are entirely different in the pathologic anatomical sense from the changes here considered.

The omental inflammation following chronic appendicitis or chronic primary colitis are characterized by their extension far beyond the original inflammatory focus and their independence. The complaints which they call forth are determined by their independent inflammatory character, further by the mechanical hindrance of the internal functions. The two forms, which cannot be sharply separated, are: (1) free epiploïtides, (2) those with adhesions.

1. In the early stages of the inflammation the true chronic epiploitis is recognizable by the very color of the omentum. The inflammation occurs in spots or larger areas. In the further course characteristic nodules are formed, of bright red color and considerable resistance, giving the omentum the appearance of granite ("granite spots"). With increasing sclerosis the omentum may take on a leathery consistency, fine strands passing free from one part of the omentum to the other may be formed, especially on the posterior aspect, and the so-called "retraction-knots" are formed, which distort the omentum and may again be the seat of inflammatory changes. Finally, after the inflammation has run its course, shining white plates are seen ("mother-of-pearl spots"). Besides these changes you find smaller or larger hæmatomata, often quite numerous, in the omentum. The changes are noted chiefly in the right side of the abdomen, but often over the entire omentum. It may shrink to a sausage-shaped tumor and distort the intestine without adhesions.

2. Adhesions may be added. Omental adhesions to the anterior abdominal wall or the pelvis are most frequent. Consequences: descent of the

transverse colon and stomach; adhesions of the colon in the kidney region ("perirenal band"); constriction of the colon by wing-shaped omental bands spread over it ("precolic ring"); but especially adhesions at the right angle of the colon whereby the colon is kinked. The well-known membranes over the cæcum and the ascending colon are looked upon as remains of chronic appendicitis and colitis co-ordinated with epiploitis.

In a series of 1453 appendectomies (interval operations or primary chronic cases) there were 372 cases of true chronic epiploitis. Of these 191 were without, and 181 with, adhesions. Simple adhesions, such as those of the organs of the pelvis, are not included. Wherever a true epiploitis was present in the pelvis, an old appendicitis was always found. Clinically, the cases are separated into those in which the symptoms cannot be differentiated from those of a chronic appendicitis, those in which the phenomena of the epiploitis are in the foreground, and those in which, in spite of an appendectomy, all sorts of symptoms remain. In cases of severe kinking, violent symptoms and occlusion crises may supervene. The inflammatory foci in the omentum (even in the third group) may give exactly the picture of an attack of appendicitis. The symptoms are those of indigestion in manifold variety: gastric disturbances, constipation varying often with diarrhœa, unpleasant abdominal sensations, drawing sensations often sharply localized (umbilical region, lumbar and kidney regions), flatulence, general weakness, pallor, etc. Sometimes an "omental cake" may be palpated. In every abdominal operation it is necessary to examine the omentum systematically. In an appendectomy one can usually pull the omentum through the usual small incision and convince oneself of the condition of the colon. If alterations are found, a large incision may be made. The operation indicated is resection of the diseased portion of omentum and loosening of pericolic membranes.

BURCKHARDT.

GASTRO-INTESTINAL TRACT

Brown: The Etiology, Symptomatology, Diagnosis and Treatment of Acquired Displacement and Fixation of the Stomach and Intestines. *Tr. Ass. Am. Physicians*, 1913, May.

By Surg., Gynec. & Obst.

The author presents a series of observations on acquired fixation or displacement of stomach or intestine, some with definite local or referred symptoms, many which on account of their long duration and the vagueness of their symptoms had been regarded as cases of neurasthenia, psychasthenia, auto-intoxication, or nervous indigestion, but which in reality were due to definite organic changes in the gastro-intestinal tract. In this series were 32 cases in which operative treatment was employed, 54 which have not been operated upon. In the former group, by the autopsy in vivo, he has had at

hand a means of fixing the relative value of the clinical symptoms and a comparison between them and the anatomical conditions. Poised, as it were, between two opposing forces, inspiratory muscles and those of the abdominal wall and pelvic floor, and fixed at but few points and loosely at that, the gastro-intestinal tract is singularly labile, singularly susceptible to change in position. In this series he has not included those cases due to pressure changes within the abdominal cavity, to weakening of the supporting tissues, to pressure of new growth, etc., but has confined his attention entirely to those due to the traction or constriction of adhesions.

In the vast majority of high-grade displacements or fixation of the large intestine, symptoms are met with explained only on the basis of a chronic toxæmia, and certainly the anlage is there in the displaced, kinked intestine, deficient in tone and propulsive power.

Certain points of especial interest were brought out in the study of these cases—the marked degree of gastric or intestinal displacement possible with no (or slight) local manifestations, but in almost all cases with some impairment of general health.

With even slight evidences of inflammatory condition in appendix, gall-bladder, etc., the gastric picture presented was of the hypersthenic type, while in the case of adhesions with no inflammation even of a low grade, the asthenic type of stomach was more usual. In two of these latter cases, they met with a *limitis plastica*; in two, the wide open pylorus with dilated duodenum, regarded by Codman as a gastro-mesenteric ileus.

In certain cases of adhesions between gall-bladder or liver and lesser curvature of stomach we have the organic basis for the orthostatic type of hour-glass stomach with obstructive symptoms, especially marked in the upright and ameliorated in the prone position.

Coxalgia is present in a number of cases of chronic appendicitis, and if persistent without signs of tuberculosis should make one suspect this as a cause.

Fluoroscopy was done in all cases, besides the X-ray photograph, and the former gave, as nothing else can, a means of studying these fixations and displacements and the effect of change of position and the respiratory movements, and furnished the best criterion as to the probable success of non-operative or the necessity for surgical treatment.

Chronic changes in the pancreas were met with in certain of the toxic cases, and probably play a considerable rôle in the production of digestive and nutritional disturbances. In this same group of cases peculiar regressive changes in omental and sigmoid fat were seen, sometimes associated with pain.

In all cases, in addition to the proper dietetic and medicinal treatment, posture, exercises, massage, corsets, etc., should be tried, using repeated fluoroscopic examinations as the criterion of efforts. It is surprising how much success will follow this treatment if

the adhesions are not too dense, the kinking or constriction not too marked.

If non-operative treatment has proven unsuccessful, recourse to surgery is justifiable—appendectomy, separation of adhesion, drainage of the gall-bladder, pyloroplasty, gastro-enterostomy, appendicostomy, or cæcostomy, as the case may be.

After all these operations, and, in fact, after all operations within the abdominal cavity, however simple, proper after-care is absolutely essential to prevent the formation of new adhesions, and in the lack of this after-care the surgeons have been singularly negligent as a rule, and have sometimes left behind a condition no less, and often more, serious than the condition for which they were operated. Such after-treatment consists of very frequent change in position during the early days after the operation, by moving the patient from side to side, by alternately elevating the foot and the head of the bed, and, as soon as the condition of the wound warrants it, massage of increasing depth, to be kept up a considerable period of time.

In all cases with a congenital tendency to splachnoptosis, especially in children, one should try by exercise, diet, massage, etc., to improve the tone of the abdominal muscles, to increase the abdominal fat and to enlarge the lower thoracic zone, in the hope of preventing a ptosis of high grade with its tendency to stasis, low grades of peritonitis and appendicitis, and consequent secondary displacements, fixations, constrictions or kinks.

A consideration of these cases brings out certain general facts:

1. A large group of cases usually considered of functional nature have in reality a true organic basis in a fixation or displacement of stomach or intestines. In many cases it is impossible to find any cause for the condition except a long lasting stasis of intestinal contents which seems under certain conditions to lead to chronic appendicitis, pericolicitis or perityphilitis with subsequent formation of adhesions; in other cases a careful analysis of the clinical history will bring out an acute attack, often in the far past and usually regarded as of trifling nature, which in all probability was the beginning of the trouble, the first cause of the changes being in the gall-bladder, or duodenum, or pylorus, or appendix, cæcum, colon, or sigmoid, as the case may be.

2. A chronic appendicitis, pericolicitis, inflammatory condition of the gall-bladder, a superficial erosion or ulceration of the mucous membrane of pylorus or duodenum, or a neoplasm may cause adhesions and associated fixation or displacement of stomach or intestines without definite local signs or symptoms in which a diagnosis is only possible by the use of all the diagnostic aids at our command, study of the temperature at rest and after exercise, of the leucocytes, of the contents of the stomach after the test supper and the test breakfast, of the urine and fæces—the former to help us in a fragmentary way, it is true, in determining whether the liver is insufficient in its protective mechanism

against poisons produced or found in the intestines, poisons which probably play a considerable rôle in the production of certain of the symptoms of the case, the latter especially for occult blood, undigested foodstuffs, and for quantitative estimation of the pancreatic ferments; of the character and localization of pain or soreness if present, pain down the right leg or in the right hip being of especial interest in diagnosing chronic appendicitis, and the use of the X-rays, both radiophotography and fluoroscopy being employed by us in all cases, the latter in our experience being of fundamental importance, as by its use we are able to study not only change in the position of stomach or intestines, but also the effect of deep abdominal inspirations and expirations, and of the change from upright to prone position; in other words, fluoroscopy will tell us as nothing else—except a long series of radiographs—the effect upon the motor function of stomach or intestine of the fixation or displacement. By the employment of all these means a correct diagnosis can be made in the great majority of cases, if we may judge by the verification of the diagnosis in our group of cases by the operative findings.

3. In certain of these conditions we have without doubt the organic basis for various vague functional disturbances of digestion or for conditions regarded as neurasthenia, psychasthenia, or of a condition of health in which the patient is neither sick nor well, but always below par. An organic digestive condition, even if of very low grade, may change a person of even normal nervous habitus into a neurasthenic if it acts over a sufficiently long period of time; and obviously, upon a susceptible nervous system, the type so frequently met with in splachnoptosis, in which secondary fixations or displacements are so common, the effect will be greater and more permanent. It would seem, therefore, that the diagnosis of neurasthenia, psychasthenia or chronic nervous indigestion is only justifiable after the physician, by the use of all possible diagnostic means, has been able to definitely eliminate the possibility of an underlying organic basis of which these acquired fixations and displacements of stomach and intestines play a considerable rôle.

It must not be forgotten in the study of these cases that function is more important than form, physiology than morphology, and the assumption that a change in position in the intestine from horizontal to vertical will materially increase the difficulty of propulsion is contrary to the fact that for æons of years this has been taking place in certain portions of the intestinal tract with no apparent disturbance. It is lack of tone, not displacement per se, that is the cause of the trouble, although in the origin of this atonic condition, adhesions, displacement, kinking and constriction may all play a part, and it is only by careful quantitative and qualitative studies of ferments and complicated chemical substances that we may hope to finally reach the basis of the local and general disturbances met with in this group of cases.

Zaaijer: Successful Transpleural Resection of the Carcinoma of the Cardia (Erfolgreiche transpleurale Resektion eines Kardiocarcinoma). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 419.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports a case of carcinoma of the cardia in which he operated successfully by a transpleural method of his own. After he had determined by exploratory laparotomy the presence of a tumor at the cardia which reached to the hiatus of the œsophagus and was movable, hard, the size of a pigeon egg and had made a fistula at the pyloric end after the method of Kader, he undertook a few weeks later the actual resection in two stages in the following manner: In the first period under pressure narcosis he resected sub-periosteally the 6th to the 12th ribs on the left side for a distance of from 24 to 14 cm. from the costal cartilage backward to the angles of the ribs, through two incisions running parallel to the ribs. He closed the wounds by sutures. After the patient had sufficiently recovered from this step, the radical operation followed after thirty days, again under pressure narcosis. He made a circular incision in the left hypochondrium from the mammillary line upward to the posterior axillary line and reaching above the angle of the scapula. He then opened the abdomen and the left pleural cavity. Introducing the left hand into the abdomen and the right into the chest cavity, he determined the operability of the carcinoma, which extended into the diaphragm. Next he isolated the œsophagus, during which the right pleura was torn into in one small place. A gauze strip was led around for traction with which the œsophagus was put in tension. The diaphragm was split in the middle up to the hiatus of the œsophagus and a circular incision of the diaphragm ring was made. After ligating the omentum minus and cutting through the left triangular ligament and the gastrosplenic ligament, the stomach could easily be pulled out so far that it could be cut through above the tumor between two clamps by means of a thermocautery. After suturing the aboral lumen it was again replaced into the abdominal cavity, while the tumor end which was closed with a clamp was placed outward. Following this there was a dissection of the œsophagus, partly by cutting and partly by blunt dissection, until the healthy part could be pulled up to the skin without stretching. After the incision in the diaphragm had been carefully closed in two layers and at the same time the tear in the right pleura closed, the left lung was inflated and the œsophagus fixed to the costal pleura 4 cm. above the tumor. The left chest cavity was hermetically closed and the abdominal wall was closed by suture. The tumor was finally removed by cutting with thermocautery between two clamps. The clamp which closed the œsophagus was allowed to remain in the bandage for three days to avoid an infection of the wound at too early a period.

As regards a few details of the method of operation, the following can be added: The author

does not believe in a primary union of the stomach and oesophagus. He expects to do this at a subsequent operation. So that the patient might partake of soft food through the mouth, he united the oesophagus fistula with the stomach fistula by an apparatus. He considers the preceding extensive resection of the ribs as an important step in the actual removal of the tumor. He thereby obtains a collapse of the left side of the chest, whereby the operative field, which is otherwise very deep, can be more easily reached, and permits the subsequent resection of the tumor. He emphasises the fact that it is advisable not to remove the 12th or even the 11th rib in the first operation, because after their removal the diaphragm will permit the lower part of the thorax to retract too much; at times through displacement of the mediastinum severe disturbances of respiration follow, which, however, can be overcome by administration of oxygen under pressure.

The author regards the thickening which the costal pleura undergoes an additional advantage of the preceding operation on the chest wall. The subsequent nourishment of the oesophagus follows much better from a thickened than from a thin normal pleura. The fear of Sauerbruch and Enderlen that the extensive isolation of the oesophagus results in harmful reduction of its nourishment the author does not agree with, as a result of animal experiments. NEUPERT.

Friedenwald and Baetjer: The Value of X-ray Examinations in the Diagnosis of Ulcer of the Stomach and Duodenum. *Tr. Ass. Am. Physicians*, 1913, May. By Surg., Gynec. & Obst.

The diagnosis of ulcer of the stomach and duodenum is at times a most difficult problem. Not infrequently important symptoms are absent and the cases then become so atypical that any additional aid in diagnosis must be looked forward to with great satisfaction. The X-ray has presented us with an important additional means of diagnosis in the study of this affection. While the authors do not believe that this method is as yet sufficiently well developed to be relied upon alone, yet they are confident that it often offers most valuable assistance as an aid in diagnosis of quite as much practical value as any of the important symptoms of the disease, and taken in connection with the other signs is of the greatest diagnostic help.

They have selected from their eighty cases of peptic ulcers, in which X-ray examinations have been made, twenty for this report, including those only concerning which they could feel confident as to the correctness of the diagnosis. Of those, there are ten cases of duodenal and ten cases of gastric ulcer.

Three of these cases were operated on, and the diagnosis was thus confirmed. Three others had been operated on, and the ulcers were revealed at the time of operation, but were not interfered with, while the remaining fourteen presented such typical symptoms of ulcer, including the presence of blood

in the stools, that the correctness of the diagnosis in these too remains undoubted.

The cases were first studied clinically, and then without any note being given as to the nature of the disorder, were sent for X-ray examinations.

The two reports were then placed side by side, and the clinical and X-ray diagnoses corresponded so closely in every instance as to make the results appear most striking.

The X-ray diagnosis of gastric ulcer and duodenal ulcer has engaged the attention of the Röntgenologist ever since the production of high-power apparatus has made it possible to obtain practically instantaneous X-rays of the gastro-intestinal tract. The old theory that there is a possibility of diagnosing ulcer by bismuth adhering to the raw surfaces is now practically abandoned inasmuch as experience has taught us that this rarely happens, because of the fact that the irritability of the raw surface produces hypermotility with violent contractions, so that it is almost impossible for the bismuth to adhere to the raw surfaces.

At present we are relying more upon the functioning of the stomach and intestines than upon the actual demonstration of the ulcer.

Curiously enough, the diagnosis of duodenal ulcer is much simpler than that of gastric ulcer. One can practically always rule out the presence of a duodenal ulcer, but one cannot always rule out the presence of gastric ulcer.

From their studies the authors have drawn the following conclusions:

1. The X-ray offers most valuable assistance as an aid in the diagnosis of peptic ulcer; and although this method is not yet sufficiently well developed to be relied upon alone without entering into the clinical aspect of the disease, it is of the greatest diagnostic help in obscure cases.

2. In duodenal ulcer there is an excessive hypermotility of the stomach with rapid evacuation of the contents, so that the greater portion of the gastric contents is emptied within the first half hour; there is hypermotility of the duodenum with formation, usually of a vacant area, which remains fixed in all of the examinations.

3. The diagnosis of gastric ulcer can only be made in certain situations; that is, when the lesion is situated on the anterior surface of the stomach, and along the anterior surface of the lesser curvature. There is in this condition an excessive irritation from the ulcer with a consequent hypermotility, and a spastic condition of the pylorus, so that for the time being there is practically no expulsion of the bismuth.

It is only when the spasticity relaxes that a portion of the bismuth is expelled. In gastric ulcer, whatever its situation, we can always look for retention of contents. In certain instances there is a vacant area in the pylorus; there is frequently a tendency to hour-glass formation.

4. The X-ray affords an almost absolute means of differentiating between gastric and duodenal ulcer.

5. By means of the X-ray we can positively rule out the presence of a duodenal ulcer.

6. We can approximately determine the degree of healing of an ulcer, which cannot be as certainly determined in any other way.

Smithies: Gastric Ulcer without Food Retention: A Clinical Analysis of 140 Operatively Demonstrated Cases. *Am. J. M. Sc.*, 1913, cxlv, 340.
By Surg., Gynec. & Obst.

To July, 1912, there has been 1,341 operations performed for ulcer of the stomach and duodenum at the Mayo Clinic. Of this number, 404 were proved to be ulcers of the stomach, in 264 (65.3 per cent) of these gastric ulcers there was a definite food retention demonstrable after twelve hours by the resin and cooked rice tests (Strauss, Hausmann). In 140 of these (34.6 per cent) operatively proved ulcers, no food retention was evident. Cases of ulcer with food retention permit of much easier diagnosis than those in which no food is retained and this study of histories, with applied routine physical examinations and laboratory methods, is designed to reduce the large number of cases whose pictures are so blurred by duodenal, gall-bladder and appendix manifestations that unreserved diagnosis is rare.

The author gives 25 tables relative to the cases reported and from the study of which he gives the following summary:

1. In more than one third of operatively proven gastric ulcers the emptying power of the stomach was maintained.

2. Ninety-two per cent of this group of ulcers occurred between the ages of 30 and 60, males being afflicted three times as frequently as females. The American-born farmer furnishes a large number of them.

3. Irregularity of food ingestion with the use of alcohol is not an uncommon concomitant of gastric ulcer.

4. Eighteen and nine tenths per cent had previously had typhoid fever.

5. A mild grade of secondary anemia was present in the average case.

6. Weight loss averaging more than twenty pounds without marked cachexia was shown in this series. The loss may be so rapid that malignant disease is suggested, but some cases consistently gain in weight.

7. Appetite was lost or was capricious in nearly three fourths of the cases; more than 65 per cent were constipated.

8. Nearly three fourths of the cases had "spells" or "attacks" of discomfort with good health in between such attacks. Such a history often extended over 30 years without alarming clinical manifestations. The attacks were usually called biliousness or dyspepsia. They often showed a peculiar seasonal relationship. In 36 per cent of instances the relationship was continuous, with or without nutritional disturbances.

9. Abdominal pain or distress was a constant symptom in gastric ulcer. It was "colicky" in nature in more than 22 per cent, requiring hypodermic medication in 12.7 per cent of cases. It was frequently mistaken for appendix or gall-bladder disease, and often associated with such in addition to gastric ulcer. Night pain with loss of sleep was present in 19.2 per cent of cases. Eighty per cent of patients complained of epigastric distress frequently referred to the right costal margin or the back. In 87.8 per cent of proved ulcers pain or distress had definite relation to food ingestion. Eighty-three per cent of cases showed pain or distress coming on within four hours following eating. Nearly two-thirds of pyloric ulcer cases had discomfort from two to four hours after eating, more than one half of lesser curvature ulcers from one to three hours after eating, more than two thirds of posterior wall ulcers within three hours after eating and more than two thirds of ulcers near the cardia less than two hours after eating, while more than 44 per cent of this class less than one hour after eating. Discomfort was most frequently controlled by ingestion of food, alkalies, and by vomiting, 12.2 per cent required morphine.

On palpation, epigastric tenderness was exhibited in 95 per cent of cases. In more than three-fourths of the author's cases the tenderness was not marked in the upper right abdominal quadrant; 2.8 per cent of cases showed palpable ridges.

More than four-fifths of the ulcers were located at the pyloric half of the stomach, and this was in general the anatomic area of greatest complaint or distress on examination.

The diagnosis of the character of the ulcer to be found on exploration was only possible when a careful anamnesis was made.

10. Vomiting was present in nearly three-fourths of gastric ulcers without food retention. About 17 per cent vomited food. Only rarely was delayed vomiting observed. Vomiting was induced in more than 10 per cent in cases to relieve pain. Nearly 40 per cent of patients vomited regularly. "Waterbrash" was a prominent feature in 19 per cent; pyrosis and eructation in 87.8 per cent. In nearly one third of cases vomiting came at the time of maximum abdominal distress. In 28 per cent of cases the ingestion of food precipitated vomiting; more than 53 per cent vomited within three hours after eating. In 7 per cent night vomiting was a feature. Ulcers at the pyloric end of the stomach were most commonly associated with vomiting even when there was no interference with the emptying power of the stomach.

11. Hemorrhage. Of 140 proved ulcers in this group, bleeding (hematemesis or melena) was noted in but 40.7 per cent. About one fourth of the cases had hematemesis alone. One third hematemesis with or without melena, while 7.1 per cent had melena alone. Severe hemorrhage or frequently repeated moderate hemorrhages are usually associated with faint feelings or actual fainting (40 per cent). Hematemesis was more frequent than melena,

but melena alone may occur entirely independent of the location of the ulcer. While bleeding is associated with any type of ulcer, nearly two thirds of those doing so show operative evidences of perforation.

12. Test-meal findings: acidity. Irrespective of location of the ulcers the average total acidity was 55; the average free HCL 42.5; the "combined" HCL in 82 per cent of cases, between 10 and 20.

Total acidity is most commonly higher in ulcers involving the lesser curvature and anterior wall than where other parts of the stomach are involved. High free HCL is noticeably more frequent where the ulcer is at the pylorus. While high free HCL is usual in cases in the third decade of life, this is not the rule.

Following food ingestion the great majority of cases show pain within four hours. This series shows that during this period free HCL is progressively increasing. Patients complaining of continuous distress do not necessarily have a high acidity. Vomiting is not usually associated with high free HCL. More than half of the non-vomiting cases had higher acidity than was the average of those vomiting. The average free HCL of patients bleeding was 35+. More than half of the cases giving no history of hæmorrhage had an average free HCL of 46.

The highest free HCL averages are associated with subacute perforating ulcer.

13. Operative findings. More than two-fifths of the ulcers were at the pylorus.

Of 50 ulcers microscopically examined in this series, 24 per cent showed active inflammatory change, 12 per cent early carcinoma.

In 35 per cent of cases, diseased appendix was associated with gastric ulcer. In 15 per cent cholecystitis and cholelithiasis were demonstrated as concomitant processes. In nearly two-thirds of this group of gastric ulcers diseased appendix and gall-bladder were revealed operatively. In view of these figures it is evident that all laparotomies should be thoroughly exploratory even when a well-marked gastric ulcer has been demonstrated. Operative procedure should be adopted to the individual finding on exploration. A routine technique is frequently accountable for poor post-operative progress.

Prompt relief of symptoms with a comfortable after-course is the rule following operative treatment of retention-free ulcer cases. This series showed an operative mortality of 1.4 per cent. Rather more than 4 per cent required a second operation. This usually occurred in uncommon cases.

H. A. PORTS.

Corner: Perforation of Gastric or Duodenal Ulcers; Inferences on Modern Treatment Drawn from Histories of Patients Who Have Recovered. *Lancet*, Lond., 1913, clxxxiv, 600.

By Surg., Gynec. & Obst.

The author classifies the ulcers particularly under discussion as gastric ulcers, which are present at the

cardiac end or in the body of the stomach, and pyloric ulcers, which term includes ulcers on either side of the pylorus, i. e. in the stomach or duodenum. Taking up the question of the performance of a gastro-enterostomy in cases of acute perforation, he does not agree with Sir Berkeley Moynihan that a gastro-enterostomy should be performed at the same operation as that at which the ulcer was sutured. He reports 40 patients who have recovered from an operation for the perforation of a gastric ulcer between 1900 and 1910. He says that the patients owe their cure largely to two factors: (1) the situation of the ulcer; and (2) the pathologic character of the ulcer.

(1) *The situation of the gastric ulcer.* From his investigations he believes it is reasonably certain that ulcers in the cardiac end and body of the stomach offer a far better chance of complete cure than do ulcers in the neighborhood of the pylorus, whether they be on the anterior or posterior wall or on either curvature. He believes that one is quite safe to argue that a gastro-enterostomy is not required in as many as half the cases of the perforation of a gastric or duodenal ulcer.

(2) *The pathologic character of the ulcer.* To sum up the results of his examination of these 40 cases and 5 years of literature, it would seem that:

1. Many subjects of the perforation of a gastric ulcer are benefited by a gastro-enterostomy. This is particularly true if the perforating ulcer is in the neighborhood of the pylorus, gastric or duodenal.

2. It would appear, speaking generally, that a secondary gastro-enterostomy, i. e., after the patient has recovered from the immediate danger of the perforation, is better than a primary gastro-enterostomy.

3. It is better for the patient to have a secondary gastro-enterostomy when it is required than to have the additional danger of a primary gastro-enterostomy which may not be needed. It would appear that the "betting" is rather against than for the gastro-enterostomy.

4. It has not been shown that a primary gastro-enterostomy presents such advantages over a secondary gastro-enterostomy that it should be practiced in the treatment of the perforation of ulcers even when situated in the neighborhood of the pylorus.

In reference to occlusion of the pylorus, Corner says that without pyloric obstruction a gastro-enterostomy is no panacea for ulcers in the neighborhood of the pylorus or duodenum. This occlusion of the pylorus was first suggested by Berg. Since this date the author has always placed a ligature on the pyloric end of the stomach when doing a gastro-enterostomy for pyloric ulcers. When the patient's condition allows it, he has had better results from a posterior gastro-enterostomy done after Roux's method than any other. In default of being able to do a Roux's gastro-enterostomy he believes that it is better to do an entero-enteros-

tomy and place a ligature, not tightly, on the afferent loop of the jejunum between the entero-enterostomy and the stomach, as first suggested by Fowler.

The best local treatment for a perforated gastric or duodenal ulcer is to close it by suture, and the abdomen with drainage. Many perforations deemed to be closed satisfactorily at the operation are not so an hour or two later, hence there is a justifiable doubt whether cases of perforated gastric or duodenal ulcer can recover when the perforation is not closed, or at least are imperfectly closed. He says the firm closure of the perforation and of the abdomen, without drainage, is undoubtedly the best treatment that can possibly be carried out. If this fails or appears to afford a doubtful closure of the perforation, no further time should be spent on it, but the ulcer plugged and drained; this drain is removed in about 36 hours under anæsthesia with nitrous oxide gas and is not replaced. In regard to the occurrence of ventral hernia, examination of the patients who had recovered from an operation or operations for the perforation of a gastric or duodenal ulcer showed two facts: First, it may be premised that ventral herniæ are not infrequent after an operation for the suture of a perforated gastric or duodenal ulcer. Secondly, where two incisions were present, it was more usual to have a hernia through the scar in the upper abdomen than through that in the lower abdomen.

DONALD C. BALFOUR.

Faroy: Results of Surgical Treatment in 69 Cases of Plain Cancer, and Cancer Imbedded Upon Ulcers, of the Stomach (Résultats du traitement chirurgical de 69 cas de cancers et ulcéro-cancers gastriques). *Arch. de mal. de l'appar. digest.*, Par., 1913, vii, 61. By Journal de Chirurgie.

Of 120 cases which Mathieu has had operated upon for carcinoma of the stomach since 1907, Faroy has only 69 records which are sufficiently complete to be serviceable for analysis. These allow a study of the post-operative course and the conditions favorable for prolonging life.

All the pylorotomies have been followed by recurrence.

The patients on the service of Mathieu who were in too feeble or cachectic a condition were not operated upon because in such no benefit is derived from intervention.

Out of eight exploratory laparotomies, six died soon after the operation (3, 19, 23, and 30 days); two survived (one six months, the other one year).

Of thirty-nine gastro-enterostomies, eight survived from a few hours to a few days; eleven did not survive six months; nine survived for six months to one year; nine from one year to two years; one has survived two years (2 years and 6 months); one three years (3 years and 4 months).

Among these thirty-nine must be included nine "ulcero-cancers" (carcinoma developing upon a pre-existing ulcer); five (55 per cent) have not sur-

vived one year; four (45 per cent) have survived over one year.

Of the remaining thirty (pyloric cancers or cancer of the lesser curvature), 77 per cent have not lived one year, 23 per cent have lived more than one year.

Eleven simple pylorotomies (Billroth I) were performed; five died in a few days; five survived from one to four years and six months; one (total gastrectomy) survived three years.

Six Billroth II; two died in ten and fifteen days respectively; four survived from two months to a year and ten months. Thus, 45 per cent died in a few days and 55 per cent made satisfactory recoveries. Of the sixteen cases ten had an ulcero-cancer and six a cancer of the pylorus. The results appear better in the ulcero-cancer.

The extent of the neoplasm, if it causes a stenosis, should not be a contra-indication to gastro-enterostomy, since this allows the patient to be nourished.

According to the character of the tumor the results are different, thus in ulcero-cancers the survivors of more than a year are 66 per cent; in cancer proper they are only 33 per cent.

The results are not so good in the young on account of the more rapid development of the neoplasm. Immediate improvement in general follows operative intervention and is very marked in most of the cases, being evidenced by increase of appetite. Increase in weight is almost constant, the degree and rapidity varying. Of seven radioscopic examinations, in six cases the stoma functionated perfectly, in one case the stoma functionated slightly and six months later not at all. In two cases of the seven, the pylorus had regained in part its function. The dilated stomach sometimes retracted. But soon the symptoms of the disease recurred, at first intermittently, and became constant toward the end; namely, digestive disturbances, pain, vomiting and hæmorrhage if the tumor had been left. In some cases the patients complained of diarrhoea which is dependent upon the hypo-acidity of the gastric juice, which can be effectively treated.

Finally, in two cases there has been noted the return of the symptoms of stenosis as a result of invasion of the stoma by the neoplasm. Death occurred most often as a result of progressive cachexia; in other cases it resulted from the recurrence of stasis and stenosis; at times as a result of metastatic complications.

J. OKINCZYC.

Weil: Statistics of Resection of the Stomach (Beitrag zur Statistik der Magenresektion). *Berl. klin. Wchnschr.*, 1913, I, 390.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Of the 800 stomach operations undertaken in the last 5½ years in the clinic at Breslau there were 157 resections of the stomach, of which 149 are discussed in this paper. Among these there were fourteen cases of ulcer callosus which were resected because of the impossibility of making a positive diagnosis. Of these three died after the operation. In 80 per

cent of the cases a tumor or a resistance could be felt before the operation and so a diagnosis was made. Pylorus tumors which are easily palpable give the best possibility for resection. To determine the possibility of a resection, laparotomy alone could decide. Bilroth II is the method of choice. Operation was done in two steps in three cases. Two cases were cured and in the third there developed, three weeks after the first operation, an enlargement of the tumor to such an extent that it was not operable; therefore this procedure is not used as a routine. The mortality of operation of the 135 cases operated for carcinoma is 22 per cent. The operations were performed by twelve different operators. In 75 per cent of the cases at autopsy there was pus in the abdomen. The final results showed a continued cure of 11 cases operated for ulcer callosum. Of the cases operated for carcinoma only 2 to 3 per cent showed lasting results. These figures can be improved only by operating more frequently than before in the earliest stages of carcinoma of the stomach.

SALZER.

Berg: The Influence of Gastro-enterostomy on Gastric and Duodenal Ulcers. *J. Am. M. Ass.*, 1913, lx, 881.
By Surg., Gynec. & Obst.

Berg lays particular stress on the following points:

1. Simple gastro-enterostomy can influence pyloric or duodenal ulcer only when there is an attendant pyloric spasm. In the absence of the latter all food passes through the patent pylorus, even though a gastro-enterostomy is present, and so the ulcerated area is not protected from trauma.

2. The reflux of duodenal contents into the stomach is a natural attendant on gastro-enterostomy and serves to alleviate the distressing symptom of hyperacidity, but it does not favor healing of the ulcer.

3. Gastro-enterostomy will not protect against recurrence of the ulcer. Barring the question of malignant degeneration of a healed or healing ulcer, excision of an ulcer has no particular merit over a gastro-enterostomy toward preventing recurrence or recrudescence.

4. Pylorectomy does protect against recurrence, but it has an attendant higher mortality. Gastro-enterostomy with pyloric exclusion favors healing of the ulcer, and has the same value in preventing recurrence as has pylorectomy, with the advantage over the latter of a very low mortality (1.5 to 2 per cent against 12 to 14 per cent).

He has found the occluding ligature safe and easily applied. A heavy Pagenstecher thread is passed behind the stomach, just proximal to the antrum, then threaded on a curved needle and one or two stitches taken through the peritoneum and muscularis of the anterior wall of the stomach, to prevent the ligature from sliding, and on slowly tying the mucous walls of the stomach are brought together but care is observed to avoid constricting the circulation. This operation has all the advantages and none of the disadvantages of pylorectomy. It is the

only way in which, on the basis of preventing the passage of food through the patent pylorus, we can prevent the recrudescence or reformation of gastric ulcer, since with healing of ulcer after gastro-enterostomy the pyloric spasm, which causes the stomach contents to flow through the artificial opening, subsides, the pylorus opens, the artificial opening closes and food once more passes through the pylorus over the ulcer surface.

Berg has practiced this operation of pyloric exclusion many times since 1901 for bleeding ulcers in the pyloric region, for duodenal fistula or accidental wound of the duodenum and for simple or callous ulcer in the pyloric portion of the stomach. He has practically never seen any bad results.

L. G. DWAN.

Hertz: The Cause and Treatment of Certain Unfavorable After-effects of Gastro-enterostomy. *Proc. Roy. Soc. Med.*, 1913, vi, 155.
By Surg., Gynec. & Obst.

Hertz draws attention to some of the unfavorable after-effects of gastro-enterostomy. A very small percentage of patients upon whom a gastro-enterostomy has been performed have at some later period complained of symptoms which were trivial in comparison with those of the condition for which the operation was carried out, but which were none the less sufficient to prevent the patient from regarding the result of the operation as entirely satisfactory.

The author claims that the symptoms in a considerable proportion of cases are due to: (1) Too rapid drainage of the stomach or, (2) situation of the stoma above the upper level of the gastric contents. In the former, the patient complains of a sensation of fullness which occurs during each meal and disappears rapidly. This sense of fullness is localized slightly lower than the former position of pain or discomfort for which the operation was performed. In some cases there is a slight diarrhoea, the bowels being opened after each meal; and, except for the first stool passed in the day, are unformed or even fluid. In this group of cases, X-ray examination reveals a small, hypertonic stomach with too rapid drainage of the food into the jejunum. The jejunum is consequently distended in an abnormal way and brings about a sensation of fullness. The diarrhoea is mainly due to the irritation of the bowels by food which has escaped too rapidly from the stomach for efficient gastric digestion, and consequently there is an absence of the normal stimulation of pancreatic secretion by hydrochloric acid in the duodenum and the food does not undergo sufficient compensatory digestion in the intestines.

Complete relief or considerable improvement occurs if the patient lies down for an hour after each meal as the stomach empties itself less rapidly in this posture. In addition the patient should be given some active pancreatic ferments at each meal to compensate for the deficiency of the normal secretion. Small doses of belladonna and cocaine given half an hour before meals are also of value.

In the second class of cases, where there was extreme dilatation of the stomach, the author noted that in the vertical position the whole of the gastric contents accumulated in the lowest part of the stomach in such a way that their upper limit was below the pylorus. In such cases nothing could leave the stomach, however strong the peristalsis, until the patient lay down. By supplying the patient with an abdominal support and making him lie down for an hour after meals on his left side, complete relief was eventually obtained.

CHAS. GORDON HEYD.

Glaessner and Kreuzfuchs: Pylorospasms (Über den Pylorospasmus). *München. med. Wchschr.*, 1913, lx, 582. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors contend that the motility of the stomach is influenced not only by the gastric secretions themselves, but also by the secretory conditions of those parts of the digestive canal beyond the stomach, particularly by those of the duodenum (Pawlow's Chemoreflex). By means of the X-ray he studied pylorospasm in connection with ventricular ulcer, achylia gastrica, duodenal ulcer, biliary and pancreatic affections.

They differentiate between immediate and delayed pylorospasm. In ventricular ulcer the former occurs with pain immediately after filling the stomach and is characteristic of this condition. The spasm may soon subside and is, therefore, not determined by the length of time the ingesta remain in the stomach.

On the contrary, delayed spasm occurs in affections of the duodenum, biliary passages or pancreas. It, too, is synchronous with the pain, but appears at a later stage in the digestive process. The pain depends in both instances upon the pylorospasm, its location being identical, and it is no way dependent upon the mechanical or chemical considerations of the organs involved, as the authors point out most conclusively.

Pylorospasm and physiological pylorus reflex depend alike upon the relation between the acidity of the stomach and the alkalinity of the duodenum. The authors have formulated the relation as follows: HCl in excess of alkalinity = pylorospasm. HCl equal to or less than alkalinity = open pylorus and automatic gastric motility. From the acidity alone one cannot draw any conclusions regarding pyloric action.

In man, the acidity of the stomach and the alkalinity of the pancreatic juice are at all times and under all circumstances equivalent in value from a physiological standpoint.

OEHLEH.

McGlannan: Intestinal Obstruction: a Clinical Study of 181 Cases. *J. Am. M. Ass.*, 1913, lx, 733. By Surg., Gynec. & Obst.

The author analyzes 181 cases of intestinal obstruction. He studies the clinical picture of early, curable obstruction and endeavors to determine the

proper character and extent of operation when gangrene and toxæmia are present.

He divides the course of obstruction into three stages: (1) the stage of onset; (2) the stage of compensation; (3) the stage of complications (local or systemic). In most cases the symptoms of the various stages merge into each other, irrespective of definite periods of time.

Symptoms of onset. The most constant initial symptom is paroxysmal abdominal pain. This was present early in all cases. Pain with constipation occurred in 30 per cent of the cases. There may be diarrhoea and bloody stools, especially in intussusception and intestinal tumors. The usual sequence of symptoms is pain, vomiting, and constipation. Gastric lavage does not relieve vomiting as in acute dilatation. There may be initial vomiting or simply hiccough. From statistics of operated cases the author concludes that abdominal pain alone, or pain with vomiting or constipation, or both, which are not relieved by lavage and enemata, are indications for immediate operation. He notes that purgatives may do harm.

Symptoms of the second stage. The most characteristic symptoms are visible peristalsis or visible stiffened intestinal coils. In addition, vomiting, faecal vomiting, distention (regional or general), usually with tympanites, leucocytosis, and lowered blood pressure are present. Purgation should not be given in the second stage unless the patient is prepared for operation. Immediate operation is advised when an enema gives no result either as to bowel movement or as to relief of symptoms. In the second stage, the symptoms were not relieved in thirty-nine cases; eighteen were operated and recovered; eleven out of twenty-one, operated upon later, died (gangrene was present).

Symptoms of the third stage. These are toxæmia, gangrene, peritonitis, and altered kidney function.

Operative treatment. This varies according to the nature of the obstruction and the condition of the individual case.

The author concludes that in the first stage the best operative procedure is relief of the obstruction. The same is true in the second stage if gangrene is not present. If it is, resection is indicated, or enterostomy and resection, or simple enterostomy with the loop packed off outside the abdomen, according to the condition of the patient. In the third stage enterostomy is best, either alone or with other procedures. The first duty in this stage is to remove toxic material by opening the bowel above the obstruction.

MAURICE J. GELPI.

Whipple, Stone and Bernheim: Intestinal Obstruction. I. A Study of a Toxic Substance Produced in Closed Duodenal Loops. *J. Exp. M.*, 1913, xvii, 286. By Surg., Gynec. & Obst.

The authors have made a study of the problems of high intestinal obstruction by means of closed duodenal loops in dogs. By using closed, washed loops they were able to exclude such factors as bile,

gastric and pancreatic juices and food products, and bacterial action was minimized. The loops were so made that the circulation was not disturbed and the intestinal coats were not injured. It was found that all these dogs died in about 48 hours (none lived more than three days) with the symptoms of high intestinal obstruction — low temperature and blood pressure, diarrhoea and vomiting, muscular tremors, splanchnic congestion and general collapse. The loops contained at the time of autopsy varying amounts of fluid or pasty material. When the loop was drained, at the time of operation, it was found that some of the dogs lived a month or more. Others died in 2 to 5 days with typical symptoms.

The work was carried further in the study of the nature and origin of the toxic substance produced. The material from the loop, after dilution, autolysis, sterilization and filtration, produces a typical toxic effect when administered to a normal dog intravenously, intraperitoneally or subcutaneously. The only difference noted is in the rapidity of the fatal issue, absorption from the latter two sites being slower. The liver seems to have no detoxicating action as dogs with Eck's fistulae survive no longer than those without.

No secretin was found in the duodenal fluid and the pancreatic secretion was not influenced by the injection of the material.

The authors conclude that there seems to be no escape from the conclusion that a toxic substance is formed in a closed duodenal loop and that this material is absorbed from it and causes intoxication and death.

JAMES F. CHURCHILL.

Whipple, Stone and Bernheim: Intestinal Obstruction: II. A Study of the Toxic Substance Produced by the Mucosa of Closed Duodenal Loops. *J. Exp. M.*, 1913, xvii, 307.

By Surg., Gynec. & Obst.

This paper comprises a report of a series of experiments showing that a toxic substance is produced by the intestinal mucosa in closed duodenal loops and can be demonstrated in it, and that the poison will not be formed when the mucosa has been destroyed by chemical means. No such poison can be demonstrated in the normal mucosa.

Blood taken from a dog with a closed duodenal loop was found to be non-toxic to a normal dog. Further, blood taken from a dog 2 hours after it had received a fatal dose of intestinal fluid intravenously, was found to be non-toxic to a normal dog. This would show that the toxin must be fixed by the tissues very rapidly. No anaphylactic reaction was produced by a second injection of blood from a poisoned animal, showing that no foreign protein is present. The evidence that the toxic substance can be isolated from the mucosa was obtained as follows: The mucosa from a dog with a closed loop was washed, then scraped off, diluted with salt solution and autolized with chloroform and toluol. Autolysis was allowed to continue for as long as five weeks, in one instance. The material was then

heated to 61°C., centrifuged and filtered. When given to normal dogs, intravenously, typical symptoms of intoxication were produced. When large amounts were given, death occurred. No intoxication was produced when the same procedure was carried out with normal mucosa. Intestinal mucosa from a dog poisoned with duodenal loop fluid was also non-toxic.

Attempts at removing the bacterial element in the closed loops by means of washing with bichloride of mercury, and other inhibiting solutions, had no effect on the appearance of toxic symptoms. It was found that, if the mucosa of the loop was destroyed by sodium flouride, a toxic substance was not formed. This was proven by the observation that no toxic effect was produced in normal dogs when the loop fluid was given intravenously. This, the authors believe, is the final proof that the toxic substance is elaborated by the duodenal mucosa.

It was observed that when toxic loop contents were injected into the jejunum of a normal dog, no effect was produced, proving that the toxic substance is not absorbed by the normal intestinal mucosa.

JAMES F. CHURCHILL.

White, Andrews, Saundby, Lane, Harley and Colyer: Symposium: Alimentary Toxæmia. *Brit. M. J.*, 1913, i, 537. By Surg., Gynec. & Obst.

White, in introducing the subject, said that the term "Alimentary Toxæmia" at once showed our ignorance. Cases should be grouped according to the variety of the poison, and not according to the point of entrance of the poison. Unfortunately, in the present state of our knowledge, this was impossible. The simplest alimentary toxæmia was that due to pyorrhœa-alveolaris. This was capable of producing various ill effects, either by impeding mastication, by the swallowing of micro-organisms, or by causing septicæmia by absorption of organisms from the gums, of which he had seen several fatal cases. The question of the production of bacterial poisons in the alimentary tract was a very wide one. External temperature was said to play a part, and some observers had stated that the intestinal contents of arctic animals were almost sterile.

Intestinal bacteria usually remained in their customary habitat, but various influences might induce variations from this normal. He mentioned the case of a woman in whom lavage always showed the gastric contents to be swarming with bacillus coli.

Herter had taught us that there were probably three groups of cases of alimentary toxæmia caused by micro-organisms.

(a) The indolic, in which the probable fault was that the colon bacillus invaded the lower part of the small intestine, and the patient was unable to digest carbohydrates, and usually passed abundance of indican.

(b) The saccharo-butyric, in which the organism mostly concerned was the *B. aerogenes capsulatus*; the abnormal changes here occurred in the large intestine.

(c) A group combined of a and b.

It was necessary to bear in mind, when thinking of alimentary toxæmia, that the culture medium was as important as the bacteria, a good example of which fact was the improvement which followed the withdrawal of carbohydrates in cases of carbohydrate dyspepsia. Much work had been done on the excretion of indican and ethereal sulphates in the urine, but although excessive indican was often associated with serious intestinal disturbance, yet it was generally allowed that the poison producing alimentary toxæmia was neither indol, indican nor ethereal sulphates. Mellanby and Twort had isolated creatin-destroying organisms from the alimentary canal, and found in animals another bacillus producing B. imidazoethylamine, a powerful poison, from histidine. This poison was probably destroyed in the liver, and was suggested as a cause of cyclic vomiting.

White suggested that enterogenous cyanosis was a form of alimentary toxæmia from which much might be learned, because the chemical bodies involved in its etiology—namely, hydrogen sulphide and the nitrites—were simple and readily investigated. Nevertheless, comparatively little was known about this disease.

Lately it had been urged with much insistence that intestinal toxæmia was due to intestinal stasis and the speaker thought that this was very probably true; nevertheless, it must be remembered that some people were perfectly well if their bowels were only opened once a week. If the poisons at work were bacterial, the quantity of them produced would depend upon the number of organisms, and the suitability of the medium for their growth might be so favorable that toxæmia would result without any stasis.

Those who held that stasis was mechanical in origin differed as to its cause, and evidence deduced from X-rays must be received with much caution.

The speaker considered briefly the methods of treatment and urged that the results of surgical procedures undertaken for the relief of intestinal stasis should be carefully considered, and should be made the subject of the fullest possible reports.

ANDREWS dealt with the bacteriology of the alimentary canal, and stated that the habitual tenants of the gut were facultative anærobes, and that even strict anærobes could grow there freely. Certain groups of bacteria had specifically adapted themselves to life in the intestine and had practically abandoned other modes of existence, as for example the B. coli group, most of the streptococci, and certain anærobes. In the healthy buccal cavity bacteria were present according to Gordon to the number of 10 to 100 millions per cubic centimeter, of which at least nine tenths were streptococci. In the stomach and duodenum bacteria were extremely few and in the small intestines, as long as the contents were fluid, their number was not very high. In the cæcum and colon the conditions for bacterial growth were very favorable, and the number of

organisms per gram of normal fæces ranged between 100 and 1,000 million.

The speaker discussed the named species of flora of the alimentary canal and dealt especially with the distinctions in the varieties of streptococci met with. He could see no good evidence that it was of benefit to us to have our intestines swarming with bacteria, many of the products of which seemed harmful to us. Bacteria were not altruists, but took advantage of the favorable conditions in the gut purely for their own good, and if we escaped harm it was solely by the evolution of various protective mechanisms.

Retention of the contents of any portion of the gut produced an abnormal bacterial flora and the speaker discussed the changes produced by infection of the gums and considered the bacteriology of the gall-bladder. In the colon, retention of the contents favored the multiplication of the normal bacteria and at the same time gave opportunity for the absorption of any toxic products which might be produced.

Andrews defined alimentary toxæmia as being the absorption from the alimentary canal of chemical poisons, of known or unknown composition, in sufficient amount to cause clinical symptoms, the blood having served as a channel of distribution to the tissues which are poisoned. He mentioned the frequent slight invasions of the blood stream by organisms growing in the gut, and pointed out that his definition excluded these cases. He discussed the possible function of the thyroid gland in neutralizing the harmful effects of the absorption of toxins and mentioned the probably feeble toxic effects of the products of protein decomposition. There was a possibility that excessive bacterial activity in the intestine might have a negative as well as a positive influence, by causing a destruction of substances necessary for normal tissue metabolism.

SAUNDBY considered the symptoms and treatment of alimentary toxæmia from the medical standpoint. He spoke of vegetable and animal food poisons, mentioning phalline, muscarine and flower among the former, and discussing the production and effects of the ptomaines and leucomaines among the latter. Certain foods became poisonous from the absence of some principals normally present, and the speaker mentioned beri-beri, pellagra and scurvy in this connection. Saundby discussed at some length the symptomatology of food poisoning, and stated that the connection of such diseases as pernicious anæmia and chlorosis with abnormal conditions in the intestine was by no means proved. He did not consider that mere fæcal retention caused pathological symptoms, but held that constipation was a not uncommon cause of chronic intestinal catarrh and that it was to these inflammatory consequences that the symptoms associated with constipation must be attributed. He mentioned the various protective mechanisms at work in the body, and proceeded to discuss the principles of the treatment of alimentary toxæmia, which he said should be directed to prevent the further formation of poisons and to the destruc-

tion and elimination of those already present. This might be accomplished by cutting off the supply of material, by reinforcing the digestive juices, by bacterial action, by drugs and by hydrotherapeutics.

He concluded that under normal conditions natural protective agencies were sufficient to shield the body from the dangers of poisons produced in, or introduced into, the gut in moderate quantities. That infrequent or incomplete evacuation of the colon did not in itself cause disease, but that such symptoms as arose resulted from a breakdown in the protective machinery. The diet should be a mixed one of both animal and vegetable composition. Finally, when toxæmia was present, he held that treatment should aim at eliminating the poison present, preventing further introduction, and reinforcing the natural protective agencies. Removal or exclusion of the colon was justifiable in the presence of extensive disease in its walls.

LANE discussed the surgical aspect of the condition. He held that alimentary toxæmia resulted from chronic intestinal stasis, and the consequent infection of the gastro-intestinal tract, due to improper feeding in early life, and subsequently to the prolonged assumption of the erect posture of the trunk. The changes that resulted in the drainage scheme were evolutionary in nature, and simply mechanical in origin. Bands, representing the crystallization of resistances, developed to oppose the downward displacement of the viscera. At their commencement, these bands served a useful purpose, but later they tended to impair the function of the part and consequently to shorten life. The effluent through any portion of the intestine could be controlled by mechanical means applied externally, as, for instance, by a band, a membrane, or an appendix, while the contents of the intestine might also be dammed back by the accumulation of material beyond. This was illustrated by the obstruction in the long pelvic colon seen so often in tuberculosis and rheumatoid arthritis in young people.

The results of stasis showed themselves in two distinct ways. The mechanical results of delay in the small intestines were interference with the emptying of the duodenum, with consequent inflammation, ulceration, and, later, cicatrization in its first part. Consequent on this came spasm of the pylorus, with dilatation of the stomach. The strain of the heavy stomach, often increased by a loaded transverse colon, induced inflammation and ulceration of the lesser curvature of the stomach at the site of greatest strain. An ascending infection of the intestine took place, leading to disease in the organs, such as the pancreas and gall-bladder, which opened into the gut.

Besides the mechanical changes, the chief trouble consequent on stasis was the autointoxication produced by the absorption from the gut, and especially the small gut, of more toxic material than could be eliminated. This autointoxication produced degeneration in every tissue in the body. The effect of the poisoning was shown in the heart, vessels,

kidneys, and muscles, and induced a great loss of fat. The skin became thin and pigmented. The breasts showed degenerative changes and the thyroid and other ductless glands might be affected. The general temperature was subnormal and that of the extremities markedly so. Microbic cyanosis might be present. The cerebro-spinal system was markedly affected. The patient was depressed, stupid, unfit for work, and suffered from headache and often neuralgia and neuritis. The mental condition of these cases often bordered on insanity. Changes in the organs of special sense were common.

An important effect of stasis was a lowering of the general resistance of the body, which was perhaps most commonly seen in the frequent occurrence of infection of the gums. Lane did not believe that tubercule or rheumatoid arthritis could exist except in the presence of autointoxication, and adduced evidence in support of this statement.

If we wished to deal with primary causes rather than end results, it was necessary, in all cases of autointoxication resulting from stasis, to improve the drainage of our bodies. Whether this could be effected sufficiently by the use of lubricants, an abdominal support and diet, or whether operative treatment was required, depended on the nature of the case. X-rays afforded great assistance, indicating not only the rate of passage of the contents through the gut, but often the exact nature of the obstruction as well as many of the changes in the heart and aorta which were often serious complications of autointoxication.

In most cases, obstruction of the ileal effluent was at fault, and this could be dealt with by the removal of a controlling appendix, by the division of an obstructing band, or, in other cases by fixing the divided ileum into the pelvic colon. This last method of treatment was by far the most efficient and produced marked and immediate improvement. Occasionally it was necessary to remove the large bowel as well. Lane stated that chronic intestinal stasis was a subject growing very rapidly in importance and that it could not be decided merely by conjecture or on previous experience, but had to be dealt with by the light of hard facts as afforded by the results of operative interference.

HARLEY considered the toxins of the alimentary canal, and mentioned the difficulties connected with the subject. He discussed the products occurring in the gut which might be poisonous, and mentioned the substances from which they were derived. The thinness of the epithelial cells in children and old people perhaps explained the greater frequency of toxic attacks in them. Delay in the intestines led to a marked increase of aromatic substances in the bowel, which were eliminated as aromatic sulphates; and in atony or dilatation of the cæcum there was marked increase of indican in the urine. The persistence of an increased quantity of indican and aromatic sulphate in the urine was significant and these patients had a muddy complexion with lassitude and headache.

COLYER dealt with the dental aspect of the question, and stated that the two main causes of oral sepsis were caries, and gingival disease leading to periodontal disease. He did not claim that oral sepsis was as important as intestinal sepsis, but it was a prolific source of ill health, and it was more intractable and serious in its results in patients who were mouth-breathers. He knew no means of curing periodontal disease excepting by free extraction.

E. G. SCHLESINGER.

Krüger: Mobilization of the Cæcum by Surgical Method and Comments on Kofmann's "The Functional Disconnection of the Appendix" (Operative Mobilisierung des Cæcum bei Appendektomie, sowie Bemerkungen zu dem Artikel Kofmanns: Über die Ausschaltung des Wurmfortsatzes). *Zentralbl. f. Chir.*, 1913, xl, 85.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author argues against Kofmann's advice to operate upon the appendix by suturing the cæcum and the proximal end of the appendix, thus closing its lumen. It is quite probable that the appendix, although disconnected functionally, may become infected again through the blood stream. In fact, such cases of empyema of the disconnected appendix are on record. Some of these were accompanied by perforations. In these cases it seemed immaterial whether the appendix was isolated from the cæcum by previous attacks or whether a complete stenosis had separated a peripheral portion of the appendix. Under all circumstances it seems necessary to remove the appendix in its entirety.

1. One can avoid the difficulty in appendectomy where the appendix lies behind the cæcum by adapting the abdominal incision to the position of the appendix. Therefore, it is always important to try to determine its position before the operation. The author prefers incision of Riedel, and always places this one finger's breadth above the ligamentum inguinale. But the distance of the incision from the spine varies.

2. In cases where the appendix is located behind the cæcum the cæcum is first mobilized according to Kocher's method for the duodenum. An incision two to three centimeters long is made in the peritoneal fold between the abdominal wall and the cæcum, and if necessary a somewhat longer incision is made in the peritoneum parallel to the cæcum and ascending colon. In this way the large intestine can be turned towards the median line and the hidden appendix will easily be brought to view. OEHLER.

Muller: The Insufficiency of a Cæcal Anus to Assure a Permanent Opening for the Large Intestine in Cases of Occluding Carcinoma of the Rectum and Sigmoid (De l'insuffisance de l'anus cæcal pour assurer en permanence une vidange du gros intestin dans les cancers occlusifs du rectum et de l'S iliaque). *Lyon chir.*, 1913, ix, 296.

By *Journal de Chirurgie.*

The observation of Muller can be summed up in a few lines: In a man 70 years old, with cancer of the

rectum and sigmoid, in case of accidental occlusion, the emergency procedure was cæcostomy. The patient recovered from the operation, but soon the artificial anus contracted, functionated badly and gas and faecal matter distended anew the intestinal canal. The cæcal orifice was then enlarged, which was transformed into a new anus large enough to admit two fingers. In spite of this new intervention, in spite of frequent lavages of the distal end, the engorgement of the large intestine persisted, the distention of the colon became enormous, and the only means of assuring its regular evacuation was an iliac colostomy performed a few months later.

This fact confirms once more the classical notion that the iliac anus constitutes the only real, efficacious treatment of inoperable rectal cancers. The cæcal anus still has its indications as an emergency procedure in cases of acute obstruction but it cannot bring about the regular evacuation of the big gut.

To make this iliac anus, Muller prefers the procedure of Jaboulay (lateral incision, pulling up and everting the mucosa which is fixed to the skin at a distance from the incision); he thinks this is better than the method of Reclus or to that of making the terminal anus by complete section of the intestine and closure of the distal end. CH. LENORMANT.

Cohn: The Appendix in the X-ray Picture (Der Wurmfortsatz im Röntgenbilde). *Deutsche med. Wchnschr.*, 1913, xxxix, 606.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Technique of examination: Position on back with slight rotation to the right. Patient takes bismuth meal in the morning. Examination begins after four hours; repeated transillumination as well as instantaneous radiograms. According to Trigoneff, the bismuth filling of the appendix succeeds in all cases in which the lumen is free and its connection with the cæcum is not interrupted. The position of the appendix changes with the horizontal or vertical posture of the individuals. The appendix follows the movements of the cæcum and makes its own movements around the cæcum, regarded as a fixed point. The filling of the appendix does not occur simultaneously with that of the cæcum. After 7-8 hours, and at times only on the day after taking the meal, is the shadow of the appendix recognized, while the masses of bismuth can be demonstrated in the cæcum often after four hours. The filling occurs through retrograde movements of the cæcum. Just as regular as the filling is the emptying of the contents of the appendix. We find the appendix empty, while the cæcum is still filled; on the other hand we find it still filled when the bismuth meal has practically left the intestine. Trigoneff saw repeated filling and emptying during a digestive act. Changes in the position of the organ, its varied configuration, are recognized. A constantly abnormal form may be produced by adhesions. Constrictions similar to the haustral segmentations of the cæcum are physiological and are not to be interpreted as stenoses or obliteration. FRANGENHEIM.

Jackson: Membranous Pericollitis and Allied Conditions of the Ileocaecal Region. *Ann. Surg.*, Phila., 1913, lvii, 374.

By Surg., Gynec. & Obst.

In this article Jackson described in detail membranous pericollitis. The membrane in this condition is usually a transparent, vascularized veil-like structure with bright red vessels running parallel with the long axis of the ascending colon. In some instances it appears as though the membrane came onto the colon from the lateral parietal wall just above the cæcum and courses upward, to disappear beneath the liver on the superior layer of the transverse mesocolon. In other instances it seems attached to the under surface of the liver, or it appears as though it had begun above and descended on the colon to its termination, usually just above the cæcum. Cases have been recorded where it passed across and upward to the transverse colon.

The membrane does not resemble the ordinary conception of an adhesion. It is never adherent to the abdominal wall nor to any contiguous loops of small intestine. Instead it resembles, more closely than anything, a thin pterygium. In recent cases the membrane is quite free and produces but limited restriction to the underlying colon. In more advanced and characteristic cases it seems to bind the colon close to the posterior abdominal wall, and produces such marked angulations and convolutions of the colon as to practically produce a stricture of its lumen.

Etiology. There are many theories:

1. Congenital — Many regard it as of congenital origin, but differ as to exact anatomical derivation.

2. Mechanical — Some regard it as a physiological response to mechanical demand.

3. Inflammatory — Two general theories exist under this heading, one assuming a spreading peritonitis from points of original infection without, and the other a reaction from infection within the contiguous gut.

The author himself inclines to the belief that varied causes may be responsible.

Symptomatology. The following symptoms combined are usually sufficient to establish a definite clinical syndrome:

1. Pain — This pain practically always has at some period a definite abrupt onset and is marked by periods of acute exacerbations. It is diffuse over the right side of the abdomen, though oftentimes accentuated over cæcum and hepatic flexure.

2. Tenderness — Diffuse tenderness without any attendant right rectus rigidity.

3. Constipation — Marked, particularly in well developed cases.

4. Gastric disturbances — Oftentimes resembles "chronic gastritis" or "gastric ulcer."

5. Loss of weight and tone — In long standing cases, patient shows general picture of intestinal auto-intoxication.

6. Neurasthenia — Develops late and may be overshadowed by melancholia.

Differential Diagnosis — Diagnosis can nearly always be made from careful study of symptoms. Additional evidence may be gleaned from use of X-ray, following ingestion of bismuth. Condition must be differentiated from (1) chronic appendicitis, (2) gall bladder disease, (3) gastric ulcer, (4) disease of ovaries, (5) chronic colitis, (6) Lane's kink, (7) kidney stone.

Treatment. 1. Non-surgical — This would involve: (1) the proper drainage and the removal thereby of causative factors; (2) the establishment of a correct dietary to factors of fermentation, putrefaction, and irritation; (3) methods for development of normal evacuant capacity of a gut whose muscular tone is impaired or interfered with — as by massage and exercise; (4) direct medication of the colon, mainly through colonic lavage aided by varied possible specific medicinal agents; (5) external supports to correct malpositions and obviate stasis of gravity.

2. Surgical Treatment — (1) Ileocolostomy has been used as a means of short-circuiting intestines. Colon may or may not be resected. (2) Cæcostomy and appendectomy have been used in some cases on the basis that membrane was result of chronic colitis. (3) Cæcoplexy has been advocated in cases of "mobile cæcum." (4) Plication of cæcum is used where cæcum is dilated and thinned. (5) Where angulation of flexures is marked, operation similar to Finney's pyloroplasty has been advocated. (6) Membrane itself may be simply divided or removed completely.

In conclusion the author suggests that a judicious surgical selection from all the methods will give the best results, as no one method should be followed as a routine. He further emphasized the following up of any surgical procedure by vigorous after-treatment along general lines before indicated.

R. W. MCNEALY.

Fago: Contribution to the Study of the Congenital Megacolon (Contributo allo studio sul megacolon congenito). *Gazz. de. osp. e de. clin.*, Milano, 1913, xxxiv, 300.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author shows that the above named clinical picture has improperly been called Hirschsprung's disease, and in 1846 was described by Favalli as such. The author describes the different types of mega colon: 1. Simple megacolon in which the length of the small intestine to that of the large, which is normally seven or eight to one, is increased in favor of the latter. 2. Megacolon in which there is a thickening of the entire colon in diameter as well as in the thickening of the wall. 3. Enlargement of a part of the colon with or without compensatory hypertrophy and dilatation of the central section of the colon. The pathologic changes of the individual layers of the intestinal wall of these sections of the intestine are accurately described. They are explained upon embryonic, nervous, or circulatory causes. The symptomatology of the

new-born, the child, and the adult is given. Death follows through autointoxication, intestinal colic, peritonitis following perforation, intestinal occlusion or through cachexia. In more than 57.7 per cent of the cases the disease ends fatally; 75.6 per cent of the patients are men. The etiology of the disease is unknown; it is usually congenital. Internal treatment of the condition is useless. The author discusses the different methods of operations and advises against colostomy (artificial anus high up). Better results are obtained by iliosigmoidostomy, or the partial or total colectomy. The ideal operation is that suggested by Parlavechio, which again gives normal anatomical relationships. BURK.

Chalier and Perrin: Immediate and Remote Results in Combined Operation for Cancer of the Rectum (Résultats immédiate et éloignés de l'opération combinée dans le cancer du rectum). *Lyon chir.*, 1913, ix, 150. By Journal de Chirurgie.

The work of Chalier and Perrin, a statistical study, is of much value; the authors have collected all the published observations of combined operations, amputations or resections, and they have added a certain number of unpublished cases belonging to Albertin, Delore, Hartmann, Lagoutte, Lecène. As a result they present a total of 189 cases, the summary of which constitutes the first part of their work. The following are the principal facts from these important statistics.

1. Immediate results: Operative mortality: The total mortality is 83 in 187 operations of which the result is known; that is, 44.6 per cent. If the isolated cases are eliminated and only the statistics of surgeons who have practised an appreciable number of combined operations are used it is seen that the mortality in these statistics varies between 16.6 per cent (Jonnesco), and an average of 40.8 per cent.

As is generally recognized, although the difference is less striking than some statistics based on less numerous cases would lead one to believe, Chalier and Perrin find the operative prognosis better in woman (31 per cent) than in man (fifty-two per cent). The gravity of the operation increases progressively with age. It is practically the same in amputation (42.8 per cent for 126 cases), as in resection (43.5 per cent for 62 cases). Infection (peritonitis, pelvic cellulitis, septicæmia, etc.) is the chief cause of post-operative mortality, all the more as it is necessary to attribute to it the greater part of the deaths attributed to shock or collapse; the other causes of death are anuria, pulmonary complications, intestinal obstruction (2 cases), hæmorrhage.

Among the complications which are not fatal but delay cure are found retention of urine, more or less prolonged, wound of the ureter (Milward) or of the bladder (Rotter), fœtal fistula following gangrene of the upper end of the intestine, the development of a stenosis at the site of union of the two ends of the bowel (3 cases).

2. Late results: The number of observations used in this connection are only eighty-five. Of this number are noted fifteen recurrences and six deaths by metastases of which some have been relatively late (after 3, 5, 6 years), which again shows the insignificance of the arbitrary period of three years, after which a number of authors regard operative cases as cured. Forty-one survived without recurrence from two months to three years; fourteen survived without recurrence from three to twelve years; the nine other cases died as a result of intercurrent diseases or without the cause of death being known (three of them had been without recurrence 3, 4, 19 years). The proportion of recurrence is greater in woman, probably by reason of the lower primary mortality. The authors regard these results as clearly superior to those of other methods of excision of the rectum.

3. Functional results: This analysis is of interest only in connection with resection, for in amputation it is a question only of iliac or perineal anus. In resection continence has always been perfect (except in one case of Rotter), the sphincter retaining its normal function. On the other hand, there are a certain number of cases with fistulæ, some of which have necessitated a secondary suture or an autoplasmic operation; and, in three cases, the union has failed and there has been necrosis of the upper end and the establishment of a sacral anus.

CH. LENORMANT.

Deaver: Fecal Fistula. *Therap. Gaz.*, 1913, xxxvii, 153. By Surg., Gynec. & Obst.

The various types of fecal fistula are described, the treatment of each type is discussed, and a series of 100 cases reported.

Fecal fistulæ are of two kinds, external and internal. Internal fistulæ occur between the intestine and any other hollow viscus such as the bladder, Fallopian tube, gall-bladder, ureter. Curious as are these conditions, they are usually the result of neglected pathology and dilatory treatment. This paper is concerned chiefly, however, with the external variety of fistula.

Anatomically, there are two kinds of external fistula: first, those which communicate with the outside world through a tortuous tract, involved in adhesions; and second, those in which the bowel is immediately adherent to the abdominal wall. The first variety is more apt to heal spontaneously than the second.

In the first variety, the opening is usually very small and the discharge is usually very slight and often intermittent. In the second variety, the discharge may be very profuse, or the entire fecal contents may discharge through the opening. This latter condition occurs, however, only when there is a well marked spur which prevents the contents passing on into the distal portion of the bowel, and this condition is most frequently found in cases where an artificial anus has been produced at operation.

Out of the 100 cases reported, 73 were cases of appendiceal abscess. This shows very strikingly the importance of appendicitis in the etiology of fecal fistula and also emphasizes the necessity of the early operative treatment of appendicitis. The average duration of the cases of appendicitis before operation was three days, far too long a time with our present means of diagnosis.

The early symptoms of fecal fistula are the inaugural symptoms of intestinal obstruction. These are paroxysmal pain, nausea, distention, inability to pass flatus freely, if at all. The pulse rate increases and the temperature rises sometimes to 104° or 105° , usually about 101° to 103° . The question naturally arises, is the patient developing a fecal fistula or a secondary abscess? As soon as the fistula is established, the symptoms subside, except the fever, which usually lasts a few days longer. The skin about the sinus is very apt to become inflamed, due to the irritation from the discharges.

The treatment of fecal fistulae is best carried out by leaving them alone for a considerable length of time and merely protecting them with sterile gauze. The author quotes cases which lasted for a very long time under rigorous treatment, such as cleansing, curetting, etc., but which healed with remarkable rapidity when left alone. General treatment in the way of good hygienic surroundings, good food, etc., are of great importance.

Operative treatment sometimes becomes necessary but should usually not be adopted until many months have elapsed without closure. The operative treatment consists in dissecting down to the origin of the sinus, closing its exit from the gut, and covering the closure with peritoneum. Many times it is necessary to deflect the fecal current away from the vicinity of the sinus by means of a lateral anastomosis or even by a resection. The absence of an obstruction distal to the location of the sinus must be determined before the operation is completed.

JAMES H. SKILES.

LIVER, PANCREAS, AND SPLEEN

Smith: Morphological Changes in Tissues with Change in Environment; Changes in Gall-bladder Following Autoplastic Transplantation into Gastro-intestinal Tract. *J. Med. Research*, 1913, xxvii, 399. By Surg., Gynec. & Obst.

With the development of various methods of tissue and organ transplantation, the behavior of the transplanted cells under new conditions of environment has become increasingly an object of study. In this way the viability and the function of various transplanted tissues has been determined; and consequently the conditions favoring, on the one hand, continued growth, and on the other the ultimate destruction of such tissues, have become better understood. Smith in this article records the results of a series of experiments and of his study of the subject. He first reviews the literature of the work already done; then considers the previous ob-

servations of changes in the histology of the gall-bladder in communication with the intestinal tract, and lastly, records the results of his own experiments. The animals which Smith used in this work were the dog, cat and opossum. The experiments aimed at studying early and late stages especially in completely transplanted gall-bladder tissue when the transfer of tissue had been made not alone into the small intestine but also into the large intestine and the stomach. The technique employed was that commonly used in the performance of anastomosis between the gall-bladder and the intestine by the suture method. In the second operation the abdomen was again opened, the cystic duct ligated and divided, and the gall-bladder severed from its attachment to the liver. The tissues of the fundus of the gall-bladder, now firmly united to the intestine at the point of anastomosis, obtained an entirely satisfactory blood supply from the intestinal wall. The gall-bladder was cut down to a piece corresponding to about one third to one half of its original size. The open end of the gall-bladder was then inverted and closed by a double layer of silk sutures, so that, when the operation was completed, a gall-bladder diverticulum was formed which communicated directly with the intestinal tract.

The author believes that changes in the gall-bladder after autoplastic transplantation into the gastro-intestinal tract should be regarded as tissue adaptation to new conditions of environment, of much the same order as the changes noted by Carrel and Guthrie which occurred in the wall of a vein when transplanted between the divided ends of an artery.

He finally concludes that autoplastic transplantation of the tissues of the gall-bladder into the gastro-intestinal tract is followed by definite histological changes as a result of adaptation of the transplanted tissue to new environment; that gall-bladder tissue transplanted into the gastro-intestinal tract undergoes hypertrophy of the mucosa with development of new lymphoid tissue. When transplanted into the stomach, the hypertrophy of gall-bladder mucosa may become especially marked, and be associated with active proliferation and degeneration of the transplanted cells with mucous production.

That the increase in lymphoid tissue developed in the gall-bladder transplanted to the surface of the intestinal tract, whereas a considerable decrease of lymphoid tissue occurs in gall-bladder transplanted into the sterile peritoneal cavity; affords evidence that the development of lymphoid tissue is in response to bacterial environment and possibly to other chemical or mechanical causes injurious to the tissue.

That there is no experimental evidence that a metaplasia occurs in gall-bladder tissue in fistulous communication with the intestinal tract, such as has been described as taking place in the human gall-bladder under similar conditions.

GEORGE E. BEILBY.

Van Hengel: Clinical and Experimental Studies of Cholecystectomy (Klinische en proefondervindelijke studie over cholecystectomie). *Dissertation*, Utrecht, 1912.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Regarding the eventual formation of a new gall-bladder, the results described by different experimenters are decidedly contradictory. Consequently, the author personally experimented upon five rabbits and fifteen dogs with the following results: Whenever a part of the cyst duct was left in situ after cholecystectomy, a new gall-bladder formed, the size of which was dependent upon the length of the duct saved; a new gall-bladder never formed in any case in which the cystic duct was extirpated flush up to the ductus hepaticus. In the latter cases, the larger bile ducts were markedly widened in contradistinction to the former. There never was found the least widening of the papilla of Vater, or any ill effect upon the general health following a cholecystectomy. In nine cases reported in the literature, the author found unusual dilatations of the large bile ducts with no impediment in the ductus choledochus. In these cases the gall-bladder functions had ceased for some time previous to the operation on account of stones, contraction, obliteration of the lumen, and like causes.

The influence of diet and medication upon the flow of bile, the author studied in patients having biliary fistulæ. He observed the following: White of egg diet has the greatest influence, its maximal effect occurring $2\frac{1}{2}$ hours after the meal; hence, earlier than most authors believe. A second maximum is reached, on an average, six hours after the meal. Carbohydrates have a decidedly smaller and less regular influence; oils (*Ol. olivarum*) hardly any and very irregular influence. The curves of biliary flow in these cases are very similar to those noted by Bruno in cases having the gall-bladder and the papilla of Vater intact. The author deduces from the experiments just quoted that the curves indicate the amount of bile secreted in the liver, and not, as claimed by Bruns, the amount of bile excreted into the gut. That the latter function is dependent upon the action of the sphincter of Oddi is also a supposition of Bruns. Chologogues had very little, asperin still smaller, and the remedy of Dufresne not any, influence upon the secretion of bile. Ovogal produced a great increase of the secretion, beginning $\frac{1}{2}$ to $3\frac{1}{2}$ hours, and reaching its maximum five hours, after its administration. *Fel humanum* had a still more marked effect, beginning, as a rule, one hour after administration and attaining its maximum three hours later. After 6 to 8 hours, excepting several remissions, no influence was discoverable. These latter experiments prove that the bile was not only reabsorbed by the intestines and again excreted by the liver, but also that it stimulated the secretory action of the hepatic cells. As an additional proof, it was found that the total amount of bile secreted under the conditions just mentioned was equal or nearly

equal to the sum of the bile normally secreted plus the quantity excreted; the fæces and the urine showed that little was re-absorbed by the intestines.

The author had observed a decided psychical influence upon the secretion. To study the relation existing between biliary secretion and its excretion into the intestinal canal and the function of the sphincter of Oddi in this process, the author experimented upon two dogs. He performed a cholecystostomy in both and in addition excised the papilla of Vater and the sphincter in one. He learned from these cases that the sphincter of Oddi is of no great importance; at least it does not, as Bruno says, prevent the flow of bile into the gut during fasting. The author thinks it is very evident that the secreted bile is constantly discharged into the gut as well as into the gall-bladder, and that the latter, by occasional contractions, empties itself. Microscopically it was demonstrated that the small biliary ducts were never dilated, nor was there any discharge in the hepatic duct after a cholecystectomy.

The newly formed gall-bladders showed a normal gall-bladder construction macro- and microscopically. They all had a good cystic duct. The fundus in every case contained the ligature used to tie the cystic stump during operation. The canals of Luschka were absent in every case. **HYMANS.**

Outerbridge: Carcinoma of the Ampulla of Vater. *Ann. Surg.*, Phila., 1913, lvii, 402.

By Surg., Gynec. & Obst.

In connection with the report of a case of a small carcinoma occurring at the ampulla of Vater in a 65-year-old woman, arising from the duodenal mucosa and causing enormous dilatation of the common and hepatic ducts, the author has made an analysis of 110 cases, from the literature, of malignant tumor in this region. At least six different groups of cells have been described as points of origin for one or the other of these tumors, but owing to the close proximity of all the structures concerned it is usually very difficult to determine the exact point of origin of any given tumor. From the practical standpoint, however, this is of little moment, as the symptoms produced have practically no relation to the histologic area of origin.

The most common symptom of tumor of the Vaterian region is jaundice, but this may in rare instances be entirely absent, due to ulceration of the central portion of the growth, with consequent failure to cause obstruction to the biliary flow. The jaundice is usually constant and progressive, but may be distinctly intermittent, even when obstruction is due to tumor alone, without the association of stone. Pain is present in about half the cases; it is sometimes constant, but often colicky in nature, probably due to spasmodic contractions of the gall-bladder. Vomiting, fever, intestinal hæmorrhage, and ascites are among the less frequently associated conditions. There is no pathognomonic symptom of tumor of the ampulla of Vater, and the differential diagnosis from stone in the common duct, stenosis

from scar formation, chronic interstitial pancreatitis, and carcinoma of the head of the pancreas may be at times exceedingly difficult.

Tumors of this region are of comparatively short duration, usually causing death within seven months, and often in a much shorter time, after the first appearance of symptoms; this result is probably due to cholæmia, as it generally occurs before metastasis or extension of the tumor to adjacent structures has occurred. About twenty-two attempts at the radical extirpation of these tumors have been made, usually by means of an incision in the anterior duodenal wall; in a few instances by resection of a segment of the duodenum. There were nine operative deaths; of the thirteen patients who recovered, only five are known to be alive seven months or more after operation, the longest period recorded being three and three-quarter years.

Molineux: The Possibility of Replacing the Choledochus by Implantation of the Processus Vermiformis (Über die möglichkeit eines Choledochusersatzes durch einpflanzung des Processus Vermiformis). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 447. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of a case, the history of which he describes in detail, and by a communication of Lexer's on the successful replacement of the urethra by means of the appendix, the author was led to study the question of substituting the processus vermiformis for a choledochus which was largely destroyed. Plastic procedures from the gastrointestinal wall hitherto used in such cases were very complicated and an insufficiency of the sutures always threatened. Simpler were those operations in which a rubber tube was inserted between the central and peripheral ends of the choledochus. This was either left unattended in the hope that it would be extruded into the intestine or it was led to the exterior by means of an oblique Witzel's canal, so that its manual removal was facilitated. Instead of the rubber tube the author attempted to implant the processus vermiformis between the stumps of the choledochus, thus having a tissue built similarly to that of the bile passages. The author made his experiments on dead bodies, because the anatomic relations in animals are not suitable in this respect. Since the urethra was successfully replaced by the appendix, the latter could be implanted with equal success to replace the choledochus, because the peritoneum has a marked and rapid tendency to adhesions, which insure the healing of the transplant. Furthermore, one can lay parts of the omentum over the implanted appendix to make the success more certain. The author now describes his procedure on the cadaver.

The abdomen is opened by a pararectal incision from the arch of the ribs to the umbilicus. Appendectomy follows. After resection of the choledochus to the extent of 4-6 cm. a sound was introduced into the peripheral stump of the choledochus to the duodenum and the anterior wall of the latter cut

down upon over the head of the sound. A Nelaton catheter was pulled through in retrograde fashion so that its upper end extended to the hepaticus. A lateral opening is made in the catheter which comes to lie one finger's breadth below the papilla in the duodenum, in order to allow the bile to flow into the duodenum. Hereupon the appendix, syringed out with salt solution, was pulled over the catheter and united by button sutures with the peripheral end of the choledochus. Then the central end of the choledochus was sutured to the appendix. To reinforce the suture, portions of omentum are laid over the operative site. The catheter was imbedded in a Witzel's oblique canal and led to the exterior by a special opening in the abdominal wall. In case of operation in the living, naturally, drainage of the operative field must be instituted. The author was able to determine in the cadaver that fluid forced in drained well into the duodenum when the injections were made into the gall-bladder or the large intrahepatic ducts. The suture was always closed. Operation on the cadaver lasted one hour. If the peripheral wall end of the choledochus cannot be found or is buried in tumor masses, the author recommends oblique suture of the appendix in the duodenum, analogous to the implantation of the ureter into the bladder.

UNTER-ECKER.

Propping: Regeneration of the Cystic Duct

Following the Insertion of a Tube (Regenerierung des Choledochus nach Einlegen eines T-Rohres). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 360.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After a cholecystectomy an inflammatory stricture of the supra-duodena part of the cystic duct formed, which led to the obliteration of the passages. In a second operation, the gall passages above and below the obliterating part were opened and the defect between them, a distance of about 4 centimeters, was bridged by the branches of a T rubber hose which was removed after three weeks. One week later the wound healed completely. After a few weeks icterus again developed, which after two and one half years forced a third operation to be undertaken, in which the new formed cystic duct was found to be entirely patent and normal, so that any one not knowing of the previous defect would not have been able to detect it. In the territory of the hepatic duct there was, however, a new stenosis which again was healed by the introduction of a T tube.

In a second case a T tube was used to heal a retro-duodenal defect in such a manner that one branch of the T tube was introduced into the hepatic duct, the other through a Witzel's diagonal fistula into the duodenum. The patient died on the twelfth day from a cholæmic hæmorrhage. At autopsy the T tube was found to be lying correctly and to be functioning. Propping regards the use of a T tube in the supra-duodenal part as better than the use of a simple drain in the lower part of the cystic duct or the insertion of a drain to bridge over a defect of the cystic duct. The defect in the retroduodenal

part can be treated by the author's method or by that of Wilm's, which consists in the introduction of a drain in the hope that it will later enter the intestine and thus be gotten rid of, or that of Voelcker, who introduces a drain through the duct via the papilla and thus forms a duct out of a diagonal canal of the intestine. The method of making a bridge in cases where it is necessary when the union of the shortened end of the gall passages cannot be made with the intestine is entirely rational.

MOSZKOWICZ.

Knappe: Pancreatic Hæmorrhage (Die Pankreas-hæmorrhagie). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 471. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author, in conjunction with Ricker, conducted some experiments upon rabbits for the study of acute pancreatic hæmorrhage. They succeeded in observing the pancreas and the mesentery for hours in the living animal. The results of their investigations differ from those of other investigators. The experiments lead to the following conclusions: The pancreatic juice of the rabbit causes stasis, hæmorrhage, and necrosis of fatty tissues. Digestion of the vessel wall does not occur, nor does a hæmorrhage due to rhexis. As the direct injection of liquids into the pancreatic duct causes a permeation of fluid into the surrounding tissues, due to increased pressure, conclusions from experiments of this nature cannot be binding. It was furthermore found that the salts of natural pancreatic juice have the same action upon the vascular system as artificial salt solutions of the same percentage. Both produce stasis and hæmorrhage due to diapedesis. Irrigation of the mesentery with an active solution of trypsin did not cause hæmorrhage by rhexis but led to stasis and hæmorrhage by diapedesis. Inactive solutions of trypsin showed no action upon the tissues, neither did solutions of steapsin, diastase or ferments. These experiments, and those carried on with bile, showed that trypsin does not attack the walls of living blood vessels and causes only a slowing of the blood stream and hæmorrhages by diapedesis. Salt solutions, active and inactive pancreatic juice, as well as some other excretions and secretions of the animal body gave similar results. Knappe is of the opinion that nervous irritation may furnish the cause of hæmorrhage in man, the same as trauma, excessive loss of blood, and poisons. He considers the incarceration of a gall-stone in the papilla as belonging to this type of nervous irritation. He enumerates some cases of acute pancreatic hæmorrhage following trauma with simultaneously existing cholelithiasis. Knappe concludes that the etiology of pancreatic hæmorrhage is not uniform. The causes may lie in the organ itself or may be transmitted to the gland by the nerves. The point of attack of the various factors, however, is uniform, as the vascular nerves are always affected. This attack in turn leads to hæmorrhage and tissue necrosis.

NORDMANN.

Crohn: The Diagnosis of the Functional Activity of the Pancreatic Gland by Means of Ferment Analyses of the Duodenal Contents and of the Stools. *Am. J. M. Sc.*, 1913, cxlv, 393.

By Surg., Gynec. & Obst.

Until recent years the function of this organ was roughly judged by the occurrence of such a symptom as glycosuria or the appearance of bulky and fatty stools, and the attempt to use the external secretion of the pancreas for diagnosis was confined to tests of the stool and urine. More recently a method introduced by Baldyreff and elaborated by Volhard consisted of the introduction of an olive-oil test-meal into the stomach and testing it for regurgitated pancreatic ferments.

Within the last few years, Einhorn, Hemmeter and Gross have independently suggested introducing into the duodenum a catheter or soft rubber tube and collecting directly the pancreatic secretion.

The author's paper is founded upon the results obtained by analysis of duodenal and stool ferments in twenty-seven chosen cases. The method of obtaining the material is essentially that of Einhorn using his duodenal pump which consists of a vulcanized rubber catheter one meter long and of narrow bore, to one end of which is attached a small perforated capsule, a glass aspirating syringe being attached to the other end. This was swallowed up to 80 cm. at eight o'clock at night, deglutition being assisted by the drinking of a little water. At twelve o'clock midnight, 8 ounces of milk are drunk for the purpose of assisting the capsule to pass the pylorus. At six-thirty A. M. the same amount of milk is again administered which serves as the test meal. Two and one half hours later the contents of the duodenum are aspirated, the catheter being withdrawn until the mark 80 cm. is opposite the incisor teeth, when it is estimated that the capsule lies in the first part of the duodenum. The contents are aspirated for five minutes, the volume and character of the resultant fluid being noted. The fluid withdrawn is assumed to be duodenal contents when (1) the radiograph shows the tube in situ in the duodenum or (2) if upon slowly withdrawing the tube while aspirating a distinct difference is noted between the contents obtained at the point marked 80 cm. and the contents withdrawn after the metal capsule is felt suddenly to enter the larger cavity of the stomach.

With the capsule in the duodenum one obtains in the course of five minutes 10 to 40 cc. of a golden yellow slightly acid or neutral rather viscid fluid of a more or less opalescent hue. The acidity in normal cases is 10 to 20 (acidity per cent).

Chemical methods: Having obtained the contents of the first part of the duodenum the presence and quantitative strength of the ferments is estimated. The fluid after dilution with twice as much distilled water is divided into two parts, one being kept acid, the other being made slightly alkaline with one tenth normal saline hydroxide; the first portion serving for amylase and lipase tests, the other for protease.

The stool: A 4 to 50 dilution of stool in slightly distilled water was used as a basis for the estimation.

For amylase the Hawk modification of the Wohlgemuth method was used.

For lipase and protease the same as in the tests with duodenal contents.

The author gives a technical discussion of the tests, considering (1) the method of obtaining the duodenal contents; (2) the identity of the amylolytic ferment; (3) the preservation of the lipolytic ferment; (4) the preservation of the proteolytic ferment; (5) the identity of the proteolytic ferments. A table showing results of the different tests made of the duodenal contents of a normal person shows that a normal average of 1 cc. of duodenal juice hydrolyses 14.1 cc. of a 1 per cent starch solution in one hour.

For lipase: Normal average, 1 cc. of duodenal contents requires 1.96 cc. tenth normal NaOH after 24 hours.

For casein test: Normal average duodenal contents in dilution of 1 to 2666 digests 10 cc. of one per cent casein solution.

In the study of this table it is found that quantitative tests of the strength of the pancreatic contents from the duodenum of a normal man varies within wide limits. In all but one instance all three were found in an active state, the one being lipase. With these findings as a basis, the author made tests in pathological cases, finding in a series of cholelithiasis, confirmed by operation, that the ferments in the duodenum were active excepting in one case examined before operation—this showed the absence of amylase and lipase. At operation, the head of the pancreas was infiltrated and swollen to a marked degree.

In a case of acute pancreatitis the ferments were absent except a faint trace of lipase, the stool giving the same results. In this case an abscess involving the body of the organ. Another case examined showed absence of the ferments which several weeks later returned. Autopsy showed a massive sarcoma involving the duodenum and head of the pancreas. Here the ducts of the pancreas had evidently been occluded for a time, then for some unknown reason the obstruction had been partially relieved and excretion established.

From a study of cases of diabetes mellitus the author concludes that in all probability the external secretion of the pancreas plays no rôle in the pathology of the disease. This, however, should not be interpreted to exclude chronic pancreatitis with changes in the islands of Langerhans as no idea of the internal secretion of the pancreas can be obtained by these analyses. In these experiments, the author holds that erepsin, even though present, is never of sufficient strength to interfere with these analyses. The author holds that these analyses are of value in diagnosing the potency of the pancreatic ducts but that more experience is necessary to determine their value in diagnosis of functional activity of the gland.

H. A. PORTS.

Deaver and Pfeiffer: Pancreatic and Peripancreatic Lymphangitis. *Tr. Am. Surg. Ass., 1913, May.*
By Surg., Gynec. & Obst.

The authors believe that the pancreatic ducts have been given undue prominence as a path of infection to the pancreas. It seems more than probable that a considerable proportion of the pancreatic swellings observed during the course of operation, particularly in connection with biliary disease, are the result of lymphatic infection transmitted from the gall-bladder or in some cases the duodenum, and possibly others of the abdominal organs. Bartels and Franke have demonstrated lymphatic paths leading from the duodenum and gall-bladder respectively which are in intimate association with the surface of the pancreas and anastomose with the intrinsic vessels of the pancreas. Peripancreatic lymphangitis and lymph adenitis are seen to be very common in biliary disease. The pancreatic lymphatics are not collected into a single trunk which emerges at the hilum of the gland as is the case with most of the organs. The lymphatics of the pancreas emerge at various points, following the vascular supply. The lymphatics of the tail and body, therefore, constitute a separate system from those of the head. It is a well-known clinical fact that the head of the pancreas is the portion which is chiefly affected in connection with disease of the biliary tract. It is a fair inference that the condition which singles out the lymphatic distribution rather than the duct distribution is more likely to have been carried by the lymphatics. In gall-bladder disease the chain of infection can sometimes be shown; namely, infected gall-bladder, enlarged lymphatics at the neck of the gall-bladder and along the course of the gastro-hepatic omentum, peripancreatic swelling and lymphadenitis and nodular swelling of the head of the pancreas. The condition when present in the pancreas may be spoken of as pancreatic lymphangitis; in its early stages the swelling is due to congestion, œdema and absorbable cellular exudate; these changes have not been recorded by pathologists because of the rarity of the material at the autopsy table, and also because the post-mortem digestion of the pancreas renders such changes inconspicuous. When the source of infection is removed the pancreatic condition subsides in the same manner as lymphangitis anywhere in the body. If not relieved, it seems probable that serious damage to the parenchyma with chronic interstitial changes may occur.

Mayo: Surgery of the Pancreas. I. Injuries to the Pancreas in the Course of Operations on the Stomach. II. Injuries to the Pancreas in the Course of Operations on the Spleen. III. Resection of Half of the Pancreas for Tumor. *Tr. Am. Surg. Ass., 1913, May.*
By Surg., Gynec. & Obst.

The pancreas is usually fixed in position, though it may be more or less movable in the body and tail. It has no true capsule, but when irritated a capsule

quickly forms from the peritoneum and those tissues derived from the peritoneum. Access to the pancreas for operative purposes is usually best obtained through the gastro-colic omenta, drawing the stomach upward and the transverse colon downward.

I. In three hundred and seventy-eight cases in our clinic of resection of the stomach for cancer there was an average mortality of eleven per cent; there were eight per cent which had pancreatic attachments resulting in injuries to the pancreas, without increased mortality. In none of these operations, however, was the main pancreatic duct reached: usually only a superficial piece was removed from the surface at a point where the pancreas had adhered to the diseased stomach. The closed end of the duodenum was implanted in the excavation in the pancreas in each case without leakage following.

Ulcers of the posterior wall of the stomach often perforate and become attached to the pancreas, thus forming an excavation in that organ. Such ulcers must be excised well down into the pancreatic tissue leaving no area of infection and a portion of the gastro-hepatic or gastro-colic omentum is loosened and fastened into the injured pancreas.

II. In the course of thirty splenectomies the tail of the pancreas, which is often closely incorporated with the pedicle of the spleen, was injured three times. In one, about $1\frac{1}{2}$ inches of the tail of the pancreas was attached to the removed spleen, and the pancreatic duct was plainly visible in the tied stump. The stump was covered by peritoneal tissue, a drain attached and dropped back in position. No drainage followed. The patient recovered. In the second case the tail of the pancreas was tied in the pedicle about an inch from the tip. The stump was allowed to drop back in this condition. The patient recovered. In the third case the spleen was of great size and the splenic artery atheromatous and during operative manipulations it was necessary to place a double ligature around the entire body of the pancreas about three inches from the tail including the splenic vessels, because when the artery was tied alone it cut through. The pancreatic tissues were considerably crushed as the ligament was pulled taut. The hæmorrhage was immediately controlled but to insure greater safety a second ligature was applied one inch further to the right. The patient recovered.

III. Resection of the pancreas for tumor occurs but rarely. In one case the tail and body of the pancreas ($4\frac{1}{2}$ inches in all) was removed for tumor. Patient recovered. Finney reports a collection of seventeen cases including one of his own. These, with the one in the Mayo clinic, make eighteen cases in which there were ten recoveries and eight deaths.

Pratt and Murphy: Pancreatic Transplantations in the Spleen. *J. Exp. M.*, 1913, xvii, 252.

By Surg., Gynec. & Obst.

Pratt and Murphy transplanted bits of pancreatic tissue into the spleen in order to study the outcome

of the transplanted tissue and the effect of these transplants in preventing the occurrence of glycosuria.

It is well known that total extirpation of the pancreas produces a rapidly fatal diabetes, but that this is prevented if a piece of the tail of the pancreas is placed in the abdominal wall and its blood supply carefully preserved. It has been maintained, however, that this experiment does not disprove the neurogenic hypothesis.

It was found by the authors that pancreatic transplants in the spleen underwent rapid autolysis. In 5 of the 9 animals examined 18 hours to 218 days after transplantation, no pancreatic tissue was found. In one dog acini were found 13 days after transplantation. In the other 3 animals in which pancreatic tissue was found the animals lived 18 hours to 8 days after operation. One experiment was performed in which the blood vessels of the transplanted portion were left intact at the time and tied off 22 days later. This dog lived 187 days after this was done. No Islands of Langerhaus were found in the nodule of pancreatic tissue remaining. The dog did not develop a persistent glycosuria, but the sugar tolerance was much lowered.

JAMES F. CHURCHILL.

MISCELLANEOUS

Crile: Relation Between Blood Pressure and the Prognosis in Abdominal Operations. *Tr. Am. Gynec. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The relation between the blood pressure and the prognosis in abdominal operations is based upon two extremes; viz., an extremely low blood pressure and an extremely high blood pressure. Provided the heart is normal, we can now control the low pressure phase by transfusion of blood, by mechanical means, or by saline solution. The high blood pressure is far more difficult to control, because it is difficult to control the factors that produce this condition. If there is cardiovascular disease due to infection or to lues, nitroglycerine may have little effect, though there is a type of cardiovascular disease that is controlled by nitroglycerine. It is not wise to reduce the blood pressure by bleeding, and aside from nitroglycerine and hygienic measures there are no other remedies. Whether the blood pressure be abnormally high or abnormally low the patient is more likely to have complications — such as thromboses, emboli, pneumonia, nephritis — indeed, the abnormal blood pressure plays into the hands of the usual dangers and complications of abdominal operations.

Could the operation be so performed that the nervous system would remain uninjured, the blood pressure unaltered, the maximum degree of safety would be reached. The author found this could be done on the principle of anoci-association.

SURGERY OF THE EXTREMITIES

DISEASES OF THE BONES, JOINTS, ETC.

Wetherill: The Growth, the Death, and the Regeneration of Bone. *J. Am. M. Ass.*, 1913, lx, 983.
By Surg., Gynec. & Obst.

The purpose of this article is to discuss the views of leading pathologists and surgeons as to the function of the periosteum in health and disease, with especial reference to its power to reproduce bone. The author quotes extensively from Macewen's book, in which he attempts to prove by animal experiments that the periosteum has no osteogenetic function but acts merely as a limiting membrane to the osteoblasts, thus preventing their overgrowth into the soft tissues.

The successful implantation of bone denuded of periosteum and the osseous proliferation and cellular growth circumferentially, of graft en masse, or from bone chips or shavings, are advanced as arguments against the osteogenetic power of the periosteum.

The author quotes Macewen to the effect that small grafts placed in a gap in the continuity of a bone show active proliferation from the whole circumference, each piece becoming an ossifying center from which sufficient osseous tissue is thrown out to fill in the gap between the various fragments and to unite them together along with the two ends of the divided shaft.

Personal cases of the author are cited demonstrating the limiting function of the epiphyseal cartilage in preventing infection from the diaphysis from reaching the epiphyseal ends of the bones.

As bearing upon his clinical observations the author quotes Murphy as saying that (1) periosteum fully detached from bone and transplanted into muscle or fatty tissue may produce bone; (2) periosteal strips elevated at one end and attached at the other, if turned out into muscle or fat, produce bone on their under surface for a greater portion of their entire length; (3) bone with or without periosteum transplanted in the same individual and contacted with other living osteogenetic bone at one or both ends always becomes united, if asepsis has been maintained and acts as a scaffolding for the production of new bone of the same size and shape. The transplanted fragment is always ultimately absorbed. The graft per se is not osteogenetic but osteoconductive.

Contrary to Murphy's results, Macewen always failed to grow bone from the detached periosteum and invariably succeeded in producing new bone from transplants en masse or from shavings, the more abundant proliferation of bone always coming from the multiple small grafts. **FREDERICK DYAS.**

Wilson and Rosenberger: The Relation of Trauma to Bone Tuberculosis. *Tr. Am. Orthop. Soc.*, 1913, May.
By Surg., Gynec. & Obst.

Wilson and Rosenberger critically analyzed the clinical and histological aspects of the relation of

trauma to bone tuberculosis. Animal experiments and clinical experience, together with a review of the literature, fail to reveal any logical connection between trauma and bone tuberculosis.

Histological studies are convincing that the progress in inflammation is antagonistic to tuberculosis, thus confirming the clinical observation that tuberculosis never accompanies, or follows, fractures, sprains, or other severe injuries. It is purely theoretical to look for slight injuries, like bruises and contusions, because there can be no sound basis for their consideration.

The animal experiments of many investigators have clearly proven that infection has produced tuberculosis where no trauma was used, and frequently demonstrated that the injured joints were less frequently involved in tuberculosis than the uninjured joints. Clinical experience proves that trauma is often trumped up, or its occurrence often directed attention to a previously existing tuberculosis.

Infestation differs from tuberculous infection, and therefore whatever lowers the vitality of the patient and diminishes resistance becomes a potent factor in the retrograde progress of bone tuberculosis, and thus brings into conspicuous prominence a latent tuberculosis. Conversely, whatever produces active circulation, greater powers of resistance, increased recuperative ability, will induce recovery from tuberculosis by the process of walling-in.

It is impossible to determine upon any rational basis that trauma bears any other relation to tuberculosis than a co-incidental condition.

Fraser: An Experimental Study of Bone and Joint Tuberculosis. *J. Exp. M.*, 1913, xvii, 362.
By Surg., Gynec. & Obst.

Fraser points out in his analysis of the experiments of Schuller, Muller, Krause, Benda, Lannelongue, Friedrich, Pietrzikowski and Salvia that contradiction prevails, and that it is difficult, experimentally, to reproduce the usual clinical phenomenon of tuberculosis in bones and joints.

In regard to the etiology and pathology of bone and joint tuberculosis, he states that experiments were performed to find out: first, the route of infection; second, the factors governing the localization of the lesion.

Ten animals were injected with dried bacilli from one to two milligrams, and six weeks later were examined. There was found a disseminated tuberculosis. The bones and joints showed no involvement although they were given careful examination. The other route was that of ingestion of food adulterated with tubercle bacilli, the animals living six weeks. They were then killed and after an examination showed a general tuberculosis, the first source of infection being in the mesentery. The bones and joints were negative as before.

This research revealed that bone and joint tuberculosis is not apt to occur after generalized infection.

In regard to the "factors which governed the localization of the lesion," it was necessary to infect a localized area of bone. The tibia was usually selected. The tuberculous material was injected into the medulla, care being taken to prevent the tissues surrounding being infected. The human bacillus was employed. Fully developed guinea pigs and rabbits were used in the experiment. Seven guinea pigs were inoculated and lived from ten to sixty days. The examination of the infected bone showed that tuberculous osteomyelitis developed in four out of seven cases. In the three negative cases the microscope failed to reveal active tuberculosis; in one of the cases there was a healed-in tuberculous focus.

An experiment on rabbits was performed, two rabbits being infected with the human bacillus and two with the bovine bacillus. The two infected with human bacilli showed, in the one, slight pulmonary tuberculosis but no active tuberculosis in the bone; the other showed slight pulmonary tuberculosis and no tuberculosis of bones. The two infected with bovine showed, in the one, no general tuberculosis but slight tuberculous osteomyelitis; the other showed the same findings.

From this was found that the human bacillus produced no osteomyelitis. The bovine bacillus causes a slight lesion but never severe. The "cellular action" in the rabbits is so intense as to prevent general spread of the bovine type of bacillus.

Another test was made on rabbits, with the human bacillus, and this time the epiphysis of the bone was chosen as is seen clinically in tuberculosis of bones. Two rabbits were used, the human bacilli injected through the medullary space into the epiphyseal region, care being taken not to infect any adjoining structure. After about sixty to ninety days the animals were examined. There were no general or local infections to be found.

From these experiments can be seen the great difficulty of infecting the medulla of healthy bone with tuberculosis; even in the guinea pig, an animal very susceptible to the infection, there is seen an inclination to recover.

The rabbit, naturally immune to the human bacillus, has the ability to prevent the development of the infection; the bovine bacillus causes only a very slight development of the disease. Clinically, from this it would seem unlikely to have a primary tuberculosis of cortex or medulla of bones.

To find the action of infection on joints, four rabbits were chosen, the left knee joint of each was infected. In two of the rabbits injection was made with the human bacilli, in the other two with bovine bacilli. Those infected with the human bacillus lived one hundred and twenty-eight and one hundred and thirty-eight days respectively. They were killed and examined. The test was negative as to general involvement while the joints showed a chron-

ic tuberculous synovitis. Those injected with the bovine bacillus lived forty-four days. In the one rabbit a slight pulmonary tuberculosis was found, together with an acute tuberculous synovitis of knee. The other showed the same findings.

From this experiment is seen the greater liability of joint rather than bone involvement due, possibly, to a more lessened cell resistance in joints than in bones and also the greater intensity of the bovine bacillus. Clinically, never is there such great amount of bacilli injected as is done experimentally. In order to have a gradual transmission of infection, as seen clinically, experiments were performed to that end.

Four rabbits were experimented upon; human bacilli were injected into the mesenteric vein. Fifteen to fifty-nine days elapsed. The post-mortem examination showed involvement of liver, lungs, and peritoneum but in every instance the bones and joints were not involved.

The suggestion that bone tuberculosis is due to hematogenic infection was proved unlikely. It was found that after direct inoculation of the heart blood via of the left ventricle in six rabbits, in only one instance was there found a local infection, and that a healed-in tubercle and retrogressive. All of the six cases showed, however, marked pulmonary tuberculosis. Thus, it is apparent that, without any predisposing factor, a circulation containing tubercle bacilli is not apt to cause local bone or joint tuberculosis.

Again, an attempt was made to produce bone and joint tuberculosis by injecting tubercle bacilli into the main vessel supplying the limb. In the experiment, four rabbits were used. In every instance pulmonary tuberculosis was produced, and in two cases, joints were involved — the left ankle joint and the metatarsophalangeal joint. Any change in the bone surrounding the joint was secondary to the synovial tuberculosis.

It is possible to produce joint infection by inoculation of the main blood vessel with tubercle bacilli.

The preceding experiment leads to the inquiry whether the inoculation of the nutrient vessel carrying bacilli into the medulla will cause joint infection.

An experiment was made on two rabbits, the inoculation made into femoral artery. The main trunk of the femoral artery below the nutrient artery was ligated, permitting the inoculation to pass only through the nutrient artery into medulla. In the two rabbits tested no bone infection took place, but pulmonary tuberculosis was present.

In conclusion it will be observed that it is impossible to assert that the results arrived at by experimentation correspond to those clinically seen in man, but the results of experiments will throw a great light on the probable truth.

The points adduced from the research are:

1. Direct infection of the medulla of the long bone is unlikely to lead to the development of a tuberculous osteomyelitis.

2. Inoculation of the interior of a joint with tubercle bacilli readily causes tuberculosis of the synovial membrane.

3. From such an infected joint the epiphysis or metaphysis of the bone becomes diseased.

4. Infection of the arterial heart blood does not result in the local development of tuberculosis of the bones or joints.

5. Infection of the main artery supplying a limb leads to the development of tuberculous disease of certain of the joints of that limb.

6. Direct infection of the nutrient artery does not result in tuberculous osteomyelitis of the bone.

JOHN H. SHAW.

Hammond: Heliotherapy (of Rollier) as an Adjunct in the Treatment of Bone Disease.

Tr. Am. Orthop. Soc., 1913, May.

By Surg., Gynec. & Obst.

The author shows the value of heliotherapy in the treatment of bone disease, comparing results with years in which it was not used. Distinction is made between heliotherapy in which the sinus alone is exposed, and that in which the entire body is subjected to a gradual tanning process after the method of Rollier. This results in marked stimulation of the patient as a whole, and also causes corresponding improvement in the sinus. The technique is as follows: In order to tan the skin without burning, the body is exposed serially, the feet for three periods of five minutes each the first day. The next day the feet are exposed three times for ten minutes each, and the legs for five minutes. In turn the thighs, abdomen, chest, and arms are exposed. The back of the body is exposed as well as the front. On each succeeding day, the exposure of all parts treated is made five minutes longer. When the body has become uniformly tanned, the daily exposure is increased to from three to seven hours. Comparing statistics of all cases treated at the Crawford Allen Hospital during 1911 and 1912 shows marked improvement in 1912, when heliotherapy was used for a full season. (It was used for a few weeks in 1911.) In 1911 the average gain in weight was 3 lbs.; in 1912, 4.2 lbs. In 1911 the average gain in hæmoglobin was .8 per cent; in 1912, 17 per cent. Combined with outdoor life and seabathing it is an important adjunct in the treatment of these cases.

Stocker: Etiology and Therapy of Osteomalacia and Rachitis (Über die Ätiologie und Therapie der Osteomalacie und Rachitis). *Cor.-Bl. f. schweizer Ärzte*, 1913, xliii, 257.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author's theories assume that osteomalacia and rachitis are the results of the same pathological process—a failure of calcification during the constant, intimately connected opposition and resorption of newly formed osteoplastic tissue. The metabolism going on during bone-formation is a function of the hormones, of which those originating

from the hypophysis, the thymus, the thyroids and the adrenals have a stimulating action, while those originating from the sperm-glands have a checking or restraining influence. If this be true, then it must be possible to induce softening of the bones by a prolonged administration of sperm-gland-hormones in increasing strength. Of the different methods available for this experiment, the author selected the one of implanting germ-glands in the preperitoneal tissues. After failures with rabbits, the author transplanted ovaries in a calf and testicles in a male dog, and noted the following results: homoplastic transplantations of testicles and ovaries succeed by observing certain precautions; they grow where transplanted; the hormones of the sexual glands influence metabolism to such an extent that bone changes occur corresponding to those in rachitis and osteomalacia, the bones remaining soft, i.e., ossification processes are impeded. The deduction from these experiments is: that bone changes in rachitis and osteomalacia must be a result of hypersecretion of the spermatogenic glands or of some part of those glands. The author tries to prove by well-known examples that a constant high-tension relationship exists between glands having internal secretions, so that a predominance of one group tends to overcome the antagonistic group and vice versa. The individual glands of a group are not influenced with equal force, though physiological laws are not yet known. The adrenals of the calf experimented with were atrophic. For therapeutic purposes no definite rules can yet be formulated, though it is believed that hormone-deficits can be overcome artificially by supplying the elements lacking. Cures were effected by extracts of the suprarenal, as well as of the hypophyseal and thyroid glands. In selecting the separate remedial extracts we are as yet in the experimental stage. The same conditions obtain in the treatment with the milk or serum of castrated animals, except that the latter are more difficult to procure than are the glandular extracts.

SCHULTZE.

Murphy: Osteomyelitis of the Tibia; Transplantation of a Ten-inch Segment of Bone from Opposite Tibia. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2.

By Surg., Gynec. & Obst.

The patient, a young woman of 20, injured the inner side of left leg by a misstep. She was operated on several times and the greater part of tibia removed. On admission there was an old discharging wound just above ankle, and inability to bear weight on leg.

The transplant was the longest Murphy has ever used. The incision was made along the old scar down to the ends of both the upper and lower fragments; a socket was made in the medullary canal in the upper fragment by the reamer and a smaller one in internal malleolus. A piece of bone, 10 by $\frac{3}{8}$ by $\frac{1}{2}$ by $\frac{5}{8}$ inches was removed from the crest of the other tibia and inserted into these fragments. A small wire nail above held the transplant. The

soft tissues closed with catgut and skin with horse-hair. A plaster cast from hip to toes was put on; the foot inverted and flexed at an angle of 95° ; the cast cut with a Gigli saw. Murphy never puts on a plaster cast without cutting it at once, otherwise there would be compression of the external popliteal nerve. Primary union of the wound occurred. At time of report bone regeneration was continuing. The leg was firm, and the patient had full control of all muscles. No pain or temperature since operation.

L. J. MITCHELL.

Kassowitz: Rachitis in the New-born (Rachitis bei Neugeborenen). *Jahrb. f. kinderh.*, 1913, lxxvii, 377. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The paper is a continuation of a series of articles by the author on rachitis which recently appeared in the year book for Kinderheilkunde. The question of the probability of the occurrence of congenital rachitis is discussed. Referring to his earlier investigations and contributing additional clinical and pathologic material he defends his standpoint that a congenital soft skull and a congenital rosary must be considered as genuine rachitic symptoms, and that therefore a congenital rachitis does exist. Wieland, Pommer, Schmerl and the large majority of pathologic anatomists consider the increase in size of the osseous tissue in comparison to the size which is normal for the particular period of life as the only dependable criterion for the diagnosis of rachitis. On the other hand, Kassowitz and his school claim that the nature of rachitis, especially in the beginning, consists of a hyperemia and an inflammatory new formation of blood vessels in marrow, cartilage and periosteum, as well as signs of resorption in the remaining portions of the osseous structures. The former consider the absence of calcium in the newly formed osseous tissue as the primary step in the rachitic process; the latter interpret this as a result of the abnormal increase of vascularization and congestion of these structures. The pathologic osteoid is a deceptive diagnostic sign of rachitis, as it may be entirely absent in a progressing case, even of the gravest type. With such a contrary opinion of the conception of rachitis it is not to be wondered that the changes of the skeleton of the newborn are by Wieland considered as physiologic or pathologic but not as rachitic and are designated as specifically rachitic by Kassowitz.

LEHNERDT.

Coley: Periosteal Round-Celled Sarcoma of the Femur Involving Two Thirds of the Shaft with Extensive Multiple Metastasis. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Coley reported a case of periosteal round-celled sarcoma of the femur involving two-thirds of the shaft, with extensive multiple metastases, apparently cured by the mixed toxins of erysipelas and bacillus prodigiosus, in whom ten years later a malignant tumor — sarcoma and epithelioma — developed in the thigh, at the site of an old X-ray dermatitis.

The case was believed unique in being the only one on record of periosteal round-celled sarcoma of the femur, with metastases, cured by any method of treatment. In February, 1902, the involvement of the femur was so great (two thirds of the shaft) that hip-joint amputation was strongly advised, but refused. An exploratory operation was done and the diagnosis of round-celled sarcoma confirmed by microscopical examination made by Dunham and Buxton. The X-rays were used for a number of months to the point of causing a severe dermatitis. While receiving X-ray treatment, a large metastatic tumor developed in the left pectoral region and a larger tumor, the size of a child's head, in the ilio-lumbar region. The growth in the pectoral region was partially removed and a number of X-ray treatments applied to the locality. No X-rays were used for the large ilio-lumbar tumor. The mixed toxins were begun on February 12, 1903, and continued until July 25th; eighty-six injections in all, ranging in doses from 1 to 20 minims were given. At the end of two months, the hard tumor became fluctuating. An incision was made posteriorly through the ilium, and upwards of a pint of broken-down necrotic tumor material was evacuated. The patient made a complete recovery, except for the dermatitis of the thigh, which persisted during the following ten years. In May, 1912, a small epithelioma developed at the site of the slight dermatitis in the pectoral region. In October the dermatitis of the thigh caused by the X-ray underwent extensive malignant degeneration. The tumor grew with great rapidity. An exploratory operation was done on November 27, 1912, and the tissue removed examined by Welch and Ewing, as also by Clark. The specimen examined by Welch proved to be round-celled sarcoma. The edge of the specimen showed a structure which resembled a true epitheliomatous growth superimposed upon the sarcoma. Ewing's specimen showed spindle-celled sarcoma; Clark's epithelioma of the basal-cell type. The patient grew worse rapidly and on January 2d finally consented to amputation which had been advised as soon as the diagnosis was made. At this time he was extremely emaciated; the blood count showed 35 per cent hæmoglobin, but despite his weakened condition he stood the amputation well. Death ensued two weeks later, apparently from general metastases.

A careful study of the entire specimen by both Welch and Ewing showed two distinct types of tumor side by side: one a typical epithelioma, the other a sarcoma. Section of the bone showed there had formed in the medullary cavity of the femur, a short distance above the condyle, a circumscribed tumor measuring 5 x 3 cm. Microscopical examination showed the tumor to be a squamous-celled epithelioma, interpreted by both Welch and Ewing as a metastasis from the lesion in the skin or muscle. Inasmuch as the periosteal tumor did not involve the muscle and the later tumor did not involve the bone or periosteum, Coley believed that the later tumor

development was entirely independent of the primary growth of ten years previously. This was also the opinion of Welch and Ewing, who thought that the sarcomatous tumor might possibly be regarded as a re-lighting of the old bone sarcoma of ten years ago, some of the cells of the former tumor having remained latent during this long period. Ewing was unwilling to express a definite opinion without comparing the histological structure of the later tumor with the earlier. But even with such an interpretation, i. e., that the late tumor was a recrudescence of the earlier growth, Welch stated "that the efficacy of the treatment by your method was strikingly manifested by the history of the case and so it seems to me to have brought about the disappearance of the tumor and to have kept the growth in check for ten years, and then to have the same (presumably) type of growth reappear in the original site—and this a markedly malignant type of sarcoma—is a unique chain of events which is perhaps more convincing than the disappearance of a tumor without a later return."

Coley stated that as far as he knew there was only one other case in which two types of malignant tumors (sarcoma and carcinoma) had occurred following X-ray exposure in which the diagnosis was proven by histological examination, but that he knew of no other case in which the tumor had developed such a long period after the exposure.

Marshall: A Collection of Facts, Ideas, and Theories Relating to the Diverse Elements that Contribute to Success in Treatment of Joint Diseases. *Boston M. & S. J.*, 1913, clxviii, 385. By Surg., Gynec. & Obst.

The author believes definite relationships exist between visceral ptosis and arthritis, and as with tuberculosis, gonorrhoea and pyogenic infections, which are accompanied only in a comparatively small percentage of cases with joint involvements, so also with visceral ptosis, articular changes are not always observed.

The primary causes of pathological changes in joints brought on by visceral saggings are to be found in bacterial decompositions within the stomach or intestines. Intestinal bacterial products accumulate in the circulating blood from excessive absorptions from the lumen of the digestive canal, or through defective eliminations by the kidneys, or from defective transformations and destructions by tissues of the body, or as the result of these combined influences.

When quantities of bacterial substances in circulation increase beyond certain limits, there are slowly developing pathological changes induced in the body tissues. The changes vary according to relatively variable resistances of different persons' tissues, and are observed typically as periarticular swellings, synovial effusions, anæmias, enlargement of lymph nodes, losses of muscular tone, etc.

The muscular walls and connective tissue supports of the stomach and intestines probably are acted

upon also by these same circulating bacterial products with slight resultant deteriorations. The mechanical influence of distentions and weight of food accumulations together with the harmful vascular influence produce anatomical abnormalities and saggings.

Visceral ptosis may have other origins; for example, ptosis following pregnancies and after abdominal operations, etc. It may be present in extreme degree without arthritis and without signs of intestinal toxæmia at times when physiologic functions of the stomach and intestine remain normal in spite of abnormal anatomic relations. Anatomic irregularities, however, predispose to functional ones, and sooner or later toxæmias are likely to develop. Then the small proportion of persons with non-resistant joints show articular changes. Ptosis should be considered a predisposing factor in the development of these cases of arthritis, and the primary cause recognized in the bacterial products which may produce both lesions of the joints and saggings of the viscera.

Ordinary harmless products from bacteria constantly present in the alimentary tract are sufficient to account for symptoms and changes observed, their injurious influence being due to excessive amounts in circulation rather than their unusual toxic natures. All normal products of tissue metabolism presumably produce harmful symptoms when retained by the organism in too great proportions, as in uræmia, etc. Harmless intestinal bacterial substances probably are not harmless in all proportions. No single element in the circulating blood can be decreased or increased indefinitely without upsetting healthy vascular proportions and normal functions of the tissues. Emphasis is laid upon quantitative abnormalities among normal vascular constituents as causes of obscure pathological changes in contrast to the more easily remembered active toxins of certain pathogenic bacteria and other introduced poisons.

Gout is compared with mild intestinal toxæmias — it represents the effects of excessive quantities of circulating urates, normal products of tissue metabolism, upon joints, kidneys, alimentary tract, nervous system, etc., while mild intestinal toxæmias show analogous effects of normal products from ordinarily harmless bacterial growths in the intestine when these substances are present in the blood in irritating amounts.

The condition of the blood cannot be told from the degree of intestinal fermentations and putrefactions alone, nor from the quantities of intestinal bacterial products in the urine. It depends upon the ratio between absorptions and eliminations, and not upon either one independently. Scanty quantities in the urine may be associated with excessive amounts in the circulation when the kidneys are weak; and excessive quantities in the urine may exist with low concentrations in the blood when there are excessive intestinal absorptions and large vigorous kidneys simultaneously excreting rapidly.

A similar state of affairs holds with gout with regard to concentrations of urates in blood and urine.

Finally, concentrations in circulation, which are of more importance than excessive degrees alone of intestinal putrefactions or of corresponding formations of urates, do not themselves alone determine the development of tissue lesions. Development of pathological changes depends upon the ratio between the vitality of the tissues in question and the degree of irritation produced by circulating substances. When tissue vitality is low, small proportions of irritants in the blood may cause pathological changes; when vital resistances are high, large quantities of vascular irritants may produce no apparent effects.

Bier: The Treatment of Tuberculosis of the Joints (Behandlung der Gelenktuberkulose). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Bier demonstrates a large number of patients, suffering from tuberculosis, of the various joints in whom he was fortunate in obtaining excellent results, maintaining the mobility of the joints affected. He does away with fixation of the part and uses his method of passive congestion, which is carried out for twelve hours daily; energetic iodine therapy complements the mechanical measures. Children receive two grains a day, adults three grains. By the use of iodine internally, he believes that cold abscesses, which otherwise frequently occur during treatment by passive congestion, are prevented. In a series of fifty-seven cases, but two of cold abscess are recorded. In the presence of abscess he relies upon iodine for their resorption. KATZENSTEIN.

Coley: Myositis Ossificans Traumatica. *Ann. Surg.*, 1913, lvii, 305. By Surg., Gynec. & Obst.

Coley reports three cases of myositis ossificans traumatica and brings out the difficulties of diagnosis from sarcoma. The etiology of the condition is still in doubt but many theories are advanced.

This condition must be differentiated from contusion, hæmatoma, myositis, periostitis, periarthrititis, and syphilitic tumors; but all these conditions can be differentiated by means of a careful examination aided by a good radiograph. It is sarcoma which gives rise to the greatest difficulties in diagnosis. In myositis ossificans the sharp outline, corresponding to the junction of the tumor with the bone, is always shown in the X-ray, while in sarcoma it is less distinct except in the very early stages of the disease. In myositis ossificans the consistence is much harder than in sarcoma; furthermore, it is almost always uniform in character, whereas in sarcoma it is very apt to be soft in some places and harder in others, but there is never the bony hardness that is typical of myositis ossificans. Pain is rarely observed in the early stages of sarcoma but is quite marked, as a rule, in myositis ossificans. Joint disability is also more marked early in myositis

ossificans than in sarcoma. The absolute early diagnosis is so important that in cases of doubt the author recommends exploratory section and microscopical examination of the specimen.

Treatment in these cases depends upon an absolute diagnosis, most writers recommending extirpation of tissue at a variable length of time after its appearance. Massage and early incision and evacuation of blood are condemned by the author.

R. W. MCNEALY.

Murphy: Chronic Trochanteric Bursitis. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2. By Surg., Gynec. & Obst.

A male aged 26, some fourteen years previous, was struck over right hip by a rock weighing 30 pounds falling on him. This caused severe pain in leg, but he was not incapacitated. He suffered no inconvenience subsequently, excepting that during changes of weather he had slight pain in the region of hip. In 1907 patient noticed a small swelling over the right trochanteric region. This was freely movable, soft, and not painful or tender. It gradually increased in size, and by 1912 was as large as a base ball. During these five years the patient lost 30 pounds in weight. The tumor was then excised. It was soft and had a fatty appearance. Patient then began to regain his weight, but three months after mass was excised a second mass appeared and patient immediately began to lose weight again. The mass steadily increased in size, and four months later was size of a hen's egg. Last August (1912), plasters of zinc chlorid were applied to the mass, and in two weeks it disappeared. The skin ruptured, and a yellowish discharge followed. The discharge continued up to Oct. 4th, when the femur was exposed and curetted. Yellowish discharge in small quantities appeared, and continued to the present time. Dec. 19, 1912, patient, following exposure to cold, had a chill, followed by fever. The next day a pocket of pus was opened in the thigh, and the fever subsided. Patient does not complain of pain or tenderness, and has full motion in hip-joint.

At operation the case proved to be a typical one of bursitis which had burrowed in all directions; each sinus was carefully followed to its termination, and the surface of trochanter taken off down to normal bony tissue. Curettement does no good in such cases: they require a careful, clean-cut dissection. Small tubular drain, deep catgut sutures, tension sutures of silk worm gut, horsehair for skin.

Cultures from pus before operation showed *B. pyocyaneus*, which accounted for the green color. The wound discharged green pus freely for two weeks, sometimes as much as a pint daily. The drain was then removed, and three weeks later the wound had closed completely and patient left hospital. He was given four or five injections of autogenous pyocyaneus vaccine, and it acted like turning off a faucet. The discharge ceased; complete recovery. L. J. MITCHELL.

Henderson: Regeneration of the Tendons. *J.-Lancet*, 1913, xxx, 175. By Surg., Gynec. & Obst.

The experiments were done on the Tendo Achilles of large dogs. Photos were shown of the results on four dogs. In the first, $1\frac{1}{2}$ inches of the tendon was resected and the sheath left. Nothing was used to bridge the defect. The sheath was sewn together with catgut and the leg put up in plaster of Paris, the dog being allowed to run at will in the pen. The plaster was removed at the end of 30 days and there was found to be perfect anatomic restoration. In a few days the dog used the leg normally. In the second case, both the tendon and the sheath were removed. Nothing was used to bridge the defect. The same after-care was carried out in all the cases. There was an anatomic restoration but the pseudo-tendon never functionated. In the third case one and one half inches of tendon was removed, the sheath being left. The defect was bridged with two strands of black linen and the sheath sutured over the space with catgut. There was anatomic and functional restoration. In the fourth dog there was removal of $1\frac{1}{2}$ inches of tendon with the sheath. The defect was bridged with two strands of linen. There was anatomic and functional restoration. In the fifth dog a piece of linen was put through the tendon high up and carried down to a periosteal insertion in the heel. Great proliferation occurred about the linen showing microscopically many giant cells, the result of the chronic irritation produced by a foreign body. Microscopic sections were made in all cases but macroscopic appearance is to be relied on more to distinguish true tendon.

FRACTURES AND DISLOCATIONS

Binnie: Snapping Hip. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Case 1. Male, 24 years, admitted to General Hospital, November, 1912. Four years ago right hip caught between two railroad cars causing antero-posterior crushing. Was treated in another hospital where he lay in bed five months; no splints were used. The hip was useless for almost a year. After recovery he was capable of doing light work.

Afterwards he had two complaints: (1) A marked rubbing pain at the crest of right ilium when he carried a heavy weight. This had no relation to the occurrence of his second complaint. (2) When he jumped or carried a heavy weight there was an audible and palpable snapping at the right hip which he attributed to the head of the femur becoming dislocated and which he could produce voluntarily.

Examination: When the patient leaned slightly to the right side the tip of the eleventh rib touched the iliac crest, causing a painful rubbing.

There was tenderness at this point. This position of bending toward the right was often assumed in an endeavor to prevent snapping of the hip with its disagreeable sensation and feeling of weakness.

When sustaining most of his weight on the right foot, knee extended, if the patient leaned toward his left, a thick band of tissue could be felt passing from the lower and anterior part of the trochanter major upward and backward toward the iliac crest. On extending the hip this band would slide off the trochanter backward. If he twisted himself so that the right iliac bone moved forward the thickened band slipped forward on the trochanter with a sharp "snap" which was palpable, audible at several feet, and the jerking movement of the band quite visible.

If the band was held backward with the fingers no "snap" occurred. The motions of the pelvis which have been described are equivalent to marked abduction and rotation outwards of the thigh. In the recumbent position the phenomenon could not be produced. X-ray examination was negative. Diagnosis: "Snapping Hip." On November 20, ether anæsthesia was administered. Longitudinal incision was made over the great trochanter, and corresponding incision through the *fascia lata*. There was a sausage shaped thickening of the fascia posterior to the wound and to the great trochanter (the fascio-gluteal tract of Heully). A flap of periosteum was raised by longitudinal incision from the femur at the lower part of the trochanter major and the posterior lip of the incised fascia lata was sutured to this and to the vastus externus muscle near its origin. The anterior lip of the fascia was sutured to the posterior in such a manner as to slightly overlap the original line of suture. The skin wound was closed and the limb fixed in splints.

The patient was seen a month after operation, when he was able to work. There was no recurrence of the snapping. To the patient the right leg now feels longer than the left, this of course being due to his ability to straighten the pelvis. The pain and rubbing at the crest of the pelvis has disappeared because the patient no longer bends over to the right, bringing his eleventh rib into contact with the iliac crest, as he formerly did.

Case 2. Strongly built male, aged 23, April 20, 1913. About seven or eight years ago patient saw another boy creating interest by apparently voluntarily dislocating his hip and reducing it again with a delectable snap. He admired the accomplishment so much that he successfully imitated it. There was no disability except that the snap was apt to occur involuntarily when he lifted heavy weights. The phenomenon could be produced on both sides. The following is the sequence of events: Bears weight on foot, adducts thigh (or flexes pelvis to opposite side), slightly flexes knee and then a band moves from behind forward over the trochanter with a sudden jerk. By reversing the motions at the hip the band jumps back again to its retro-trochanteric position. The snap both when the band moves forward and backward is visible, palpable, and slightly audible. The band is *not* the ilio-tibial band, but is evidently the anterior margin of the gluteus maximus; it follows an oblique line from

about an inch anterior to the posterior superior iliac spine downward and forward to the outer surface of the femur five inches below the tip of the great trochanter. This is the location of the band just as it is ready to make its forward snap. The band is about the thickness of a forefinger.

Perrin in 1859 reported a case as one of "voluntary dislocation of the hip," but in the discussion which followed it was shown that the symptoms were due to the snapping of a band of fascia or muscle over the trochanter.

Bayer operated on one hip under the diagnosis of subgluteal bursitis; found no bursitis but a laxity of the gluteal tendon. Out of forty-one cases collected from various sources, sixteen appeared due to trauma, one to fatigue, and ten were either congenital or the result of practice. In the rest of the cases the origin was doubtful as the history was not secured or the patient might well be malingerer (recruits trying to avoid military service, etc.). In seventeen cases there was a varying degree of disability, in twelve no disability, in the rest there was doubt as to disability or no history. The fact that any operation which fixes the anterior margin of the gluteus maximus to the trochanter and to the vastus externus is successful in preventing snapping seems to show that that structure is the culprit. This notion is strengthened by Ferration's observation that when he hooked up the fascio-gluteal tract with his finger, snapping became impossible. Voelker's division of the upper fibres of the muscle gave good result probably because he obtained such a great lengthening of the tract that no tension on it was possible. Possibly rupture or division of the femoral insertion may permit a retraction upward and backward of some of the muscle fibres, enough to cause a sausage shaped swelling of the muscle about its anterior margin and so increase the possibility of the peculiar jumping of this tissue over the trochanter when the proper movements are made.

SURGERY OF THE BONES, JOINTS, ETC.

Bogoras: Resection of the Leg; a Method of Excising the Knee Joint when the Latter is Extensively Involved (Die Resektion der unteren Extremität; ein neues Verfahren für Exzision des Kniegelenks bei umfangreicher Erkrankung desselben). *Ärzte-Zeit.*, 1913, xx, 3.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This operation is indicated in cases of severe tuberculous pan-arthritis, malignant tumors, etc., when the capsule of the joint is universally invaded and the surrounding soft parts are involved. The vasomotor nerve bundle, however, must be still intact.

The method of procedure is as follows: Make a longitudinal incision through the middle of the popliteal space, liberate and isolate the vessels and nerves. Make two circular incisions through the

soft parts at the level of the two ends of the nerve bundle. The bones are then resected and union of the two ends brought about with the aid of aluminum bronze wire. The periosteum and muscles are sutured together with silk thread. The nerve bundle must be imbedded between the muscle layers in the shape of an S. Make a circular skin suture. The writer had occasion to operate in this manner on two patients suffering from tuberculous pan-arthritis. Both required leg amputated. In one, resection resulted in good function although with nine centimeters shortage. The other case suffered a relapse and one month later it was necessary to disarticulate the femur. The advantages of this operation are more than one. The operation gives the best results with healthy tissue. It is possible with this method to unite the cut surfaces and the bone fragments intimately and thereby assure healing by first intention and a firm bony union. The only disadvantage, the marked shortening of the limb, can hardly be considered since the only alternative of the operation consists in amputation above the knee.

V. HOLST.

Gallie: Tendon Fixation. *Ann. Surg.*, Phila., 1913, lvii, 427, By Surg., Gynec. & Obst.

The author describes an original method for fixing the foot in corrected position in cases of paralytic talipes equino-varus or valgus. His first case, a boy of eight, had complete paralysis of both peroneals and weakness of the dorsiflexors with resulting talipes equino-varus. He first divided the tendon Achilles, forcibly corrected and put on an ankle brace with stop-joint and T strap. The deformity recurred. Then did an arthrodesis at the astragalo-navicular and calcaneo-cuboid joint. Ankylosis occurred, but the deformity recurred at the ankle joint. Then he made an incision over the peronei tendons, slipped the longus forward out of its groove and buried it in a groove on the anterior surface of the fibula with the tendon under tension, pulling the foot into valgus and dorsiflexion. The brevis was buried in a similar groove in the posterior surface of the external malleolus. Both were sutured with 30-day catgut and covered with periosteum. The foot was put up in plaster Paris for nine weeks. Fixation was so secure that the foot could not be adducted and range of voluntary motion was normal in dorsiflexion, and half of plantar flexion. After walking without a brace for two months no tendency to recurrence.

Three other cases have since been operated upon: two of equino-varus, one of valgus. In the last case the tibialis anticus and posticus were anchored to the tibia after division of the peroneals, and the patient was given a Whitman flat-foot plate when he began to walk. As only five months have elapsed since the first operation it is too soon for definite conclusions, but the author thinks, if the tendons do not stretch, the operation has advantages over others and should be further investigated.

J. L. PORTER.

ORTHOPEDIC SURGERY

DISEASES AND DEFORMITIES OF THE SPINE

Lovett: The History of Scoliosis. *Tr. Am. Orthop. Ass.*, 1913, May. By Surg., Gynec. & Obst.

The article deals with the salient points in the history of scoliosis from its earliest mention in the writings of Hippocrates. The mention of the affection of Hippocrates gave it its name, but it was evident that it was confused with other affections of the spine, as also by Paré. Suspension in the treatment dates from the middle of the seventeenth century, and the head sling from the end of that century. The affection was somewhat cleared up by André.

From the middle of the nineteenth century, scoliosis attracted great attention, and a vast amount was written about it. The modern progress appears to have begun with the application of plaster jackets in suspension by Sayre about 1875, and further progress was made by the use of high degrees of force by Wullstein in 1902. The result has been that treatment by forcible correction has come very much to the front in the last ten years, and is in the opinion of the author the only effective treatment in dealing with the moderate and severe grades of scoliosis.

The latter part of the article is largely a consideration of the evolution of forcible correction.

Porter: Scoliosis: Its Prognosis. *Tr. Am. Orthop. Ass.*, 1913, May. By Surg., Gynec. & Obst.

The author discusses the prognosis of scoliosis without reference to the various methods of treatment under six subheads.

1. The cause of the deformity. He believes that the underlying cause should be given as much weight as any other factor. Cases due to defects in development of the vertebræ and ribs offer the least hope of improvement. Those due to rachitis which have gone on to adolescence without treatment, those resulting from empyema and paralysis, offer a bad prognosis as regards complete correction.

Cases due to static errors, such as unequal length of legs, unequal development of the pelvis, and bad habits in sitting in school, have a better prognosis.

Cases due to torticollis, visual and aural defects, elevated scapulæ, etc., should be corrected when the cause is abolished, if the bones are not hard and fixed.

Cases due to unequal muscular development or strength are the most hopeful.

2. Age at onset. He says, "Generally speaking, the earlier the deformity develops, if it goes on for several years without treatment, the worse the prognosis, but where the deformity in young children is detected early and given prompt treatment we should expect excellent and speedy results."

3. Age of the patient. Next to the etiology this is the most important factor. The longer the period of growth ahead during which treatment can

be carried out, the better. The greatest successes are usually found in patients between the ages of two and twenty. In patients past middle life a deformity which has not changed for many years may grow worse from trophic changes in the bones and joints.

4. Type of deformity. Simple total curves offer more hope than compound ones. "The fewer the curves and the less the rotation the better the prognosis, provided they are below the cervico-dorsal region."

5. The patient. Personal factors, such as temperament, occupation, intelligence, general health, etc., have very marked bearing upon prognosis. An alert, optimistic, interested patient will do better than a phlegmatic, depressed, and weak-willed one. Occupations which require constant exercise in abnormal positions or long persistence in a normal one interfere with success of treatment. Obesity counts against successful treatment.

6. Incidental benefits of treatment. The improvement of the scoliosis almost invariably results in improvement of the general health.

The author cites several cases to illustrate the points referred to and also calls attention to the exceptions to the rule which are occasionally seen under almost all the conditions mentioned.

Little: Some Recent Advances in the Treatment of Scoliosis. *Clin. J.*, 1913, xli, 369.

By Surg., Gynec. & Obst.

After discussing briefly the anatomical and mechanical changes that take place in the spine in scoliosis, and referring to the various methods of treatment that have been in vogue since the seventeenth century, Little describes the method advocated by Abbott in June, 1911. Since then he has treated several cases and he reports one, a case 12 years of age with a dorsal rotation of 15 degrees which was treated with four plaster of Paris jackets. The first was applied July 6, 1912, and the last removed on January 25, 1913, a little over six months. The rotation was completely cured in the dorsal spine but a slight fullness remained in the left lumbar region.

As regards the value of this method compared with those previously in use he says: "I have now had enough experience of it to be able to say that it is, at least in my opinion, a very valuable innovation, and that I have already been able to achieve more definite improvement, amounting sometimes to practical cure, than with any other treatment which I have tried."

"Whatever may be the final verdict of the profession as to the extent to which Abbott's method will cure severe scoliosis, there can, I feel sure, be little doubt but that he has made at one bound a very great advance—an advance, in my opinion, greater than any other made in the treatment of

this deformity for many years, and one which rounds to the credit of his powers of observation and his perspicacity."

J. L. PORTER.

Forbes: The Rotation Treatment of Scoliosis.

Tr. Am. Orthop. Ass., 1913, May.

By Surg., Gynec. & Obst.

The article is an arrangement of the present methods of treatment of scoliosis in which the primary curve is in the dorsal region. The aim of the author's method is to produce a physiologic scoliosis, the counterpart of the deformity, by rotation of the spine through the rib wall. Scoliosis is a deformity of the thorax, not a deformity of the spine alone; so, as rotation is the freest of dorsal movements, rotation is the best means of treatment. The author says the ocular demonstration of correction as shown by the position of the spinous processes is apt to be misleading. Rotation is best secured in flexion as first suggested by Bradford and Lovett several years ago. Forbes thinks permanent correction is not possible by force alone, but only by physiological reposition and the application of Wolff's law. In paralytic scoliosis bone grafts may be necessary to retain the position after correction. The technique by which physiologic rotation is secured is described. Results obtained by the author, Adams, and others would certainly justify the trial of this treatment.

Freiberg: Corrective Jackets in the Treatment of Structural Scoliosis; with Especial Reference to Mensuration and Record.

Tr. Am. Orthop. Ass., 1913, May.

By Surg., Gynec. & Obst.

This paper represents a critique of Abbott's method of treating structural scoliosis by means of plaster of Paris jackets on the basis of Freiberg's personal experience. As a means of control in estimating the result of treatment, the author contrasts the photographic record with a graphic record of the deviation of the spine from the perpendicular, which has been drawn to the standard scale of 50.0 cm. The author holds that while the photograph is more convincing to the lay eye and while it gives the better general impression of the figure, the graphic record is more accurate and more useful to the surgeon. Torsion deformity should be measured by an instrument which expresses the deformity in degrees of the circle.

Six cases are reported to illustrate different types of results from the Abbott method. Case I shows the possibility of reversing the deformity in all of its elements. Case II illustrates a marked improvement, much of which was produced by bringing about lumbar compensation of a dorsal curve and shows the method to be inadequate for very high dorsal curvatures. Case III is an unsuccessful result in lumbo-dorsal curvature dependent upon congenital asymmetry of the sacrum. Cases IV and V show how it is possible to produce a marked over-correction of the patient's figure without improvement of the spinal deformity proper of correspond-

ing degree. Case VI demonstrates that post-rachitic osteosclerosis may offer insurmountable difficulty in accomplishing correction by this method.

The author's conclusions are as follows:

1. It is possible to secure reversal of the elements of deformity in some of the cases of structural scoliosis, by Abbott's method.

2. In quite a number of cases our means of correction cannot be exhausted in one jacket. It is probably better always to remove the original jacket at the end of six weeks and then renew it.

3. Abbott's method of applying corrective jackets constitutes a great advance and the correction is usually greater than has been obtained by former methods.

4. This method is capable of substantial elaboration.

Bradford: What to Do After Corrective Jackets are Discarded.

Tr. Am. Orthop. Soc., 1913, May.

By Surg., Gynec. & Obst.

Certain facts are to be held in mind by those treating cases of fixed spinal curves.

The best method of correction is by properly applied plaster jackets. But correction of the curve is not curing the patient and gymnastics are adjuvants in treatment, but not to be relied upon exclusively when a relapse is threatened.

Check braces are of assistance if they prevent slumping and faulty attitude. Such braces should be efficient and prevent slumping of the spinal column and the assumption of faulty attitude, and not be waist or thorax compressing corsets.

As there is a tendency to relapse during growth, inspection and treatment may be needed for a long period. Ugly, heavy, disfiguring appliances should not be applied for an indefinitely long period.

To be honest with himself the surgeon should, in watching the most chronic of surgical ailments, keep accurate records and measurements of contour, flexibility, curve, and rotation to enable him to detect relapse definitely and to note gain positively.

Cook: An Introduction to the Symposium on Lateral Curvature.

Tr. Am. Orthop. Soc., 1913, May.

By Surg., Gynec. & Obst.

The lumbar spine is the natural center of motion, center of gravity and center of stress of the human body.

If the lumbar spine be abnormally curved to the left, and this curve can be reversed and held, a cure is assured, for by reversing the curve of the lumbar spine, the balance of the whole body must of necessity be reversed, and the law of gravity and Wolff's law, which formerly worked to increase the deformity, will now work to correct the deformity.

Force can be brought to bear either directly or indirectly on the lumbar spine. An ordinary plaster of Paris corset, with a large window cut on either side, and a webbing band, forms a simple, inexpensive and efficient apparatus for bringing direct pressure to bear on the lumbar spine.

Abbott: Movements or Positions of the Normal Spine and Their Relation to Lateral Curvature. *Tr. Am. Orthop. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The author states that the movements of the spine are many and are like those of any flexible body. Although a child's spine is more flexible, the same changes may occur in the adult to a more limited degree. Passive motion is more important as the muscles seldom produce curvature.

A division of the spine into segments is not as important as the relations of its parts in different positions. There are five primary motions: flexion, extension, side bending, rotation and torsion.

Flexion in the child produces a long curve with the greatest change in the lumbar region. Extension produces the least effect in the dorsal region, which does not entirely lose its posterior convexity. Lateral bending is a pure movement. Rotation is a pure movement with the greatest change at the summit of the curve. Torsion is a pure movement with the greatest change at the ends.

Compound movements: Flexion plus side bending may exist without rotation. Flexion plus rotation or plus torsion may exist without lateral bending. Extension plus side bending is without torsion or rotation. Extension plus rotation is without lateral deviation. Extension plus torsion produces the greatest change at the end twisted. In side bending plus rotation, rotation may occur toward either side. In side bending plus torsion, the vertebræ turn in either direction.

There are four complex movements in which the spine may easily be placed: (1) flexion, plus lateral bending, plus rotation; (2) flexion, plus lateral bending, plus torsion; (3) extension, plus lateral bending, plus rotation; (4) extension, plus lateral bending, plus torsion. In flexion, plus side bending, plus rotation, the vertebræ may be turned with little force either way, but more readily with the bodies toward the convexity. When extension is substituted the motions are in the same direction, but the force needed to produce them is much greater. When torsion is substituted for rotation, either flexion or extension produce similar conditions. All these positions are possible, but combinations containing flexion are the easiest. This is scoliosis.

It is easy to produce scoliosis artificially, although it is a physiological posture, which at first is assumed voluntarily, but gradually becomes habitual and thus lateral curvature is developed.

HAROLD A. PINGREE.

Meisenbach: A Consideration of the Correction of the Fixed Types of Lateral Curvature Complicated by Visceral Derangements, Especially Those of the Cardiac Variety, with a Slight Modification of Abbott's Method. *Tr. Am. Orthop. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The author says there are many problems confronting the orthopedic surgeon to-day in regard to scoliosis, and much scepticism on the part of the

general practitioner in regard to the possibility of correction of this deformity. Among the things to be considered are the following: The selection of cases to be treated, the different methods to be employed in different cases, the pathologic condition of the patient before operating, the relation of curvature to disease in general, the results of correction upon the other organs and functions.

The author quotes Backman, Thorndike, and others to show that in a large number of cases statistics show disease of heart, lungs, and other organs accompanying scoliosis.

It is the conviction of the author that the fixed types, whether mild or severe, can be cured or improved, and he has found that by a careful consideration of the patient to be corrected, with a modification of the treatment in the severer types, there is little discomfort or risk incurred by the application of the Abbott jacket. He has also found that the blood pressure is not appreciably changed by the application of the jacket, and cites six cases which show that the pressure before, during, and after operation remained almost constant. He also gives three cases to illustrate the beneficial effects of correction upon the general condition of the patient, which in each case were quick and far-reaching; one, a girl of 21, being over-corrected in seven days. In each case the general health was markedly improved, and in one the hæmoglobin jumped from fifty to seventy in a few weeks.

The author emphasizes the following conclusions: The surprisingly small change in blood pressure when rotary force and flexion are applied; the disappearance or improvement of ptosis or gastric trouble after correction; the increase in hæmoglobin without medication, and the tendency of cardiac lesions to improve by correction; and he urges that in the severest cases, where there is great deformity and derangement of the viscera, treatment should be undertaken cautiously and with a view of improving the general condition of the patient; also that, as a rule, no attempt should be made to build up the system by medication until after correction.

Park: A Report of Fourteen Cases of Spina Bifida and One of Sacrococcygeal Tumor. *Buffalo M. J.*, 1913, lxviii, 437.

By Surg., Gynec. & Obst.

The author reports 14 cases of spina bifida, 13 of which were in very young children, the oldest not over 2½ years, and one case in a young man 23 years of age. All these cases were operated within the past ten years and represent the rather conventional method of extirpation of the sac with closure of the opening. In 2 cases, a very thin plate of celluloid or ivory was used as a fortification, over which the tissues were united. In the other instances more or less plastic work was done upon the vertebræ. Silver wire was used twice as a deep and buried retaining suture. Of the 14 cases, some quite unpromising, 3 died as an immediate or remote result of operation; in the others apparently ideal results were attained.

Park also reports one case of congenital sacrococcygeal tumor, the mass being larger than the infant's head, in fact nearly the size of the entire trunk. So large was it as to constitute a very serious obstacle in delivery. On the fourth day a spontaneous hæmorrhage nearly exsanguinated the patient and seemed to call for immediate operation. With scarcely any anæsthetic the mass was dissected out with but little further loss of blood, extirpation being relatively easy although the growth extended within the pelvis between the rectum and the sacrum. It proved to be a multicystic teratoma. This little patient died a few hours after the operation.

In closing his report the author alludes to the possibility of utilizing living bone, either from the same patient, e. g., rib, or from some other, or possibly some animal source. Such a fragment might be shaped to fit into the opening in the spinal canal and retained in situ by ordinary methods with every prospect of success.

Collins and Elsberg: Giant Tumors of the Conus and Cauda Equina. *Tr. Am. Neurol. Ass.*, 1913, May. By Surg., Gynec. & Obst.

The authors report five cases of giant tumor of the conus and cauda equina, operated upon by Elsberg. The tumors probably originated from the pia over the roots or from the roots of the cauda equina themselves; they grew very slowly, causing few symptoms until they attained large size. Finally the tumors filled up the entire lower part of the spinal canal surrounding the roots of the cauda and extended upwards upon the conus and lumbosacral cord.

The important features of the clinical histories were the following: (1) a history of one or more year's duration; (2) pain in the small of the back, sooner or later extending down the one and then the other lower extremity; (3) stiffness of the back in the lumbar region; (4) increasing stiffness and weakness of the lower extremities, with loss of power of dorsal flexion of the foot; (5) slight disturbance of the bladder and rectum.

The important features of the examination were the following: (1) rigidity of the lumbar vertebral column; (2) weakness and stiffness of the lower limbs; (3) paralysis of the peroneal groups of muscles; (4) drop foot on one or both sides; (5) absence of knee and ankle jerks; (6) tenderness of the lower lumbar spines; (7) irregular and asymmetrical sensory disturbances (8); Wasserman and X-ray negative.

The typical findings at operation consisted of a large reddish brown, not vascular, tumor within the dura, not intimately connected with the latter, well encapsulated above and easily freed from the conus, but closely connected with the nerve roots below.

The peculiar features in the patients were the late appearance of bladder and rectal symptoms; the small evidence of sensory disturbance in spite of the fact that the large tumors were under much pressure within the canal.

The results of the operative interference were not very satisfactory although several of the patients were much improved. It is almost impossible to remove the growths without leaving small fragments of tumor tissue behind. The operations should be done in two stages so as to allow the tumors to be extruded from the spinal canal and thus partially freed from the nerve roots. With early diagnosis radical removal should be possible.

MALFORMATIONS AND DEFORMITIES

Kunne: A Combination of Congenital Luxation of the Head of the Radius with Little's Disease (Die Kombination der "angeborenen" Luxation des Radiusköpfchens mit der Littleschen Krankheit). *Ztschr. f. orthop. Chir.*, 1913, xxxi, 138. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Three cases are reported, where Little's disease occurred simultaneously with the dislocation of the head of the radius. The following possibilities are to be considered:

1. The dislocation of the head of the radius may be congenital.
2. The condition may have a definite relation to Little's disease.

The history of the patient gives no evidence to support the first view. On the contrary, it appears from the history, examination and X-ray that the condition was not present at birth.

The literature shows clearly that all nerve diseases which cause spastic and paralytic disturbances ensue in abnormal traction of certain muscles. The latter do not only cause contractures, but also bone displacements and other deformities; even dislocations may be brought about in this manner.

It is true that the cases on record generally refer to the involvement of other joints, especially the hip joint. This, however, does not prevent the author from believing that the above named two cases probably occurred as sequelæ of Little's disease.

It has been suggested that these dislocations should be called "spastic." This is, according to the author, quite appropriate; in fact, he advocates that all dislocations concurring with spastic and paralytic disturbances should not be dismissed by calling them congenital, but should carefully be examined as to whether they can in any way be brought in relation to the dislocation forms described above. ENGELHART.

Willard: The Treatment of Flat-Foot. *Penn. M. J.*, 1913, xvi, 437. By Surg., Gynec. & Obst.

One quarter of the deformities of the body are due to the weakness of the tarsal arch. The weight bearing portions of the foot are the heads of the metatarsals, the fifth metatarsal, cuboid and os calcis. The foot is held in position by the slinglike action of the tibials and peroneal muscles. Any weakness of the tibials or overaction of the peroneals will cause the foot to evert and throw the larger share of weight-bearing on the plantar fascia; this gradual stretching and the normal outline disappears.

Weakness of the supporting muscles and aversion of the foot are to be expected after prolonged weakening illnesses, injuries such as Pott's fracture, etc., and treatment of the weakened arch should be begun before symptoms appear. The main indications for treatment in the early type are: Strengthen the weakened muscles; allow foot to take its normal position; relieve arch of strain until muscles take up their full work. To do this, muscular exercises and passive motions (massage) are of the greatest importance. The arch can be supported by a proper shoe which has a straight last, stiff shank, and low, broad heel, with felt pad in instep when necessary. Steel arch supports are injurious unless carefully made by an expert, and usually cause more pain, more pronation, and further weaken the muscles.

JOHN L. PORTER.

Osgood: The Prevention of Foot Strain. *Boston M. & S. J.*, 1913, clxviii, 380.

By Surg., Gynec. & Obst.

Osgood describes a simple apparatus for measuring the power of the foot muscles and shows that

comparison of the relative power of the adductors and abductors will often give warning of potential strain, and pain, and disability in feet which present no symptoms. For five years the author and Arthur Legg independently examined various groups of nurses, students and others and their results were so uniform that Osgood believes that preventive treatment such as proper shoeing, exercises, douching, etc., based upon the muscle strength and walking position before actual trouble has begun, will prevent its development in nearly all cases. He calls particular attention to the liability of painful feet among nurses and tabulates the result of a series of 112 of whom examinations were made before symptoms developed, and the result of treatment in those who followed advice given, and those who did not. He compares this table with that of 369 Wellesley College students. The analysis of results as related to kind of shoes worn, previous occupation, and treatment shows distinct advantage in routine examinations in institutions like schools and hospitals from a standpoint of possible prophylaxis.

JOHN L. PORTER.

SURGERY OF THE NERVOUS SYSTEM

Gordon: Experimental Study of Intraneural Injections of Alcohol. *Tr. Am. Neurol. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The object of this study was to determine experimentally the direct effect of alcohol on a motor, sensory, or mixed nerve. Two series of dogs were used, three for each. In the first series, the injection was made directly into the nerve substance after careful dissection and exposure of the nerve trunk. The supra-orbital, the facial, and the sciatic nerves were then treated. The animals were kept alive nine days. Each nerve was then dissected up to its point of origin and the Gasserian ganglion for the infra-orbital, a spinal ganglion for the sciatic nerve, also the facial nerve in its course through the medulla were all carefully examined histologically. In the second series of experiments the same nerves, some ganglia, also medulla for facial nerve, were examined microscopically after twenty-nine days of life. Besides, the clinical phenomena were carefully observed until the day of death.

Extraordinary accuracy in all experiments and uniformity with regard to the strength of alcohol (80 per cent), to the number of drops injected (5), and to the after-care of the wounds have been observed. The conclusions of the author are as follows: (1) There is a difference in histological changes when alcohol is injected into a motor, sensory, or mixed nerve. (2) A motor nerve is considerably less influenced by the intimate contact with alcohol than a sensory or mixed nerve. (3) Functional recovery follows in cases of injections into a motor nerve. (4) In cases of sensory or mixed nerves, persistent sensory, trophic, and motor

disturbances follow injections of alcohol. (5) In cases of motor nerves, the gross nerve bundles are not affected. Only the perineural connective tissue suffers, but then a condition of repair is evident in cases of long standing. (6) In cases of sensory or mixed nerves, the histological changes are very conspicuous, not only after recent injections (nine days) but also long after the first injections (twenty-nine days). Not only the nerve bundles but also their respective ganglia (Gasserian and spinal) show degenerative changes. (7) In therapeutic management of nerve affections the above difference in the susceptibility of motor and sensory nerves must be borne in mind. Otherwise irreparable damage may be done to muscles and limbs.

Malone: Recognition of Members of the Somatic Motor Chain of Nerve Cells by Means of a Fundamental Type of Cell Structure, and the Distribution of such Cells in Certain Regions of the Mammalian Brain. *Anatomical Rec.*, 1913, vii, 67.

By Surg., Gynec. & Obst.

The article is based on the study of central nervous systems in the monkey, lemur, cat, and man. The material studied was fixed in 95 per cent alcohol and imbedded in paraffin. Serial sections were stained in a 1 per cent aqueous solution of toluidin blue, differentiated in 95 per cent alcohol, cleared in xylol, and mounted in Canada balsam.

By the term "somatic motor cell," the author refers to those cells which form an integral part of the efferent nervous chain to striated muscle. The analogous, sympathetic or visceral motor cells concerned in the efferent system to the heart muscle

and smooth muscle were not studied. Jacobsohn is credited with emphasizing that motor cells have a definite histology toward the peripheral end of the efferent system, but toward the central end-station there is a transition to the sensory type. Malone believes that no such transition occurs.

"There is no gradual transition in structure between the cells of the afferent and motor chains, and there is no indication of the beginning of motor structure in the afferent cells. Those cells in the efferent chain whose function consists exclusively or primarily in conducting impulses through the chain

To cross striated muscle or between motor center are characterized by a common structure which differs according to the position of the cells in the motor series. The cells comprising the functional series may be recognized microscopically, chiefly through the arrangement of the extra nuclear chromophilic substance in relatively coarse granules."

This characteristic histological picture can be best seen with a relatively low magnification (100 x 200 diameters) and is found most characteristically in the central nervous system of those animals standing highest in the phylogenetic series.

The author believes that the definition of functional centers should be based more on localized cell groups having definite histological characters than on topographical relations. BARNEY BROOKS.

MacCallum: Hyperexcitability of Nerves in Tetany (Über die Übererregbarkeit der Nerven bei Tetanie). *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxv, 941.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

MacCallum found by his experiments that in tetany the nerves remain hyperexcitable after section. This is not due to the fact that they were so before section, but to general causes. He demonstrated furthermore that the peripheral portion of a nerve separated from its ganglion cell shows, with the development of tetany, the same hyperexcitability as the intact nerve of the opposite side. Conduction of blood from a dog suffering from tetany through the extremity of a sound dog connected with the body only by the sciatic nerve and the bone, showed that this hyperexcitability is due to changes in the circulating blood. This may be due to the presence of a toxin which becomes active by deprivation of calcium. ERNST SCHULTZE.

Delherm and Py: The Radiotherapeutic Treatment of Sciatica. *Arch. Rön. Ray*, 1913, xvii, 388.

By Surg., Gynec. & Obst.

Twelve cases are reported in which X-rays were applied therapeutically for sciatica which had resisted other methods of treatment. The reported results are good, pain usually decreasing after six or seven séances, and cures resulting in several cases after a more prolonged irradiation.

A method was used which required relatively small divided doses. The rays were directed for

the most part into two zones of the lumbar region or even into painful points along the course of the nerve. Three irritations were given to each region, an interval of a week or more elapsing between treatments. After the first series of three séances the patient was allowed to rest for three weeks. At each séance one third of a sabourand dose was given, so that a cumulative dose of 5 H. was given on each region during a series of three sittings. An aluminum filter, 5 mm. thick, was used with rays of penetration No. 6 or 7 Benoist. The equivalent spark was 10 to 12 cm. and the focus distance 25 to 30 cm.

It was strongly contended that these cases were not of the purely neuropathic variety but that the sciatica was due to a real compression of the nerve roots. In such cases where the galvanic current and other methods have failed radiotherapy is advised.

HOLLIS E. POTTER.

Murphy: End-Result of Operation for Brachial Paralysis. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2.

By Surg., Gynec. & Obst.

A man of 28, on November 3, 1910, was shot with a revolver, the bullet entering in the right supraclavicular fossa. Immediately after the arm dropped to the side and the shoulder fell. Admitted December 17th, he was unable to raise the arm to a right angle with the body, or to fold the forearm on the arm. He had lost the ability to pronate and supinate or extend the hand. He was also incapable of extending the fingers, but could use all the flexor muscles. There were no sensory disturbances. It was evident, as the result of examination, that the bullet had passed through the lower portion of the brachial plexus. The ulnar portion of the eighth cervical was intact, and the suprascapular was functioning. The musculocutaneous was partially intact; the greater portion was not. The median was also partially intact. The ulnar was completely intact. The musculospiral was entirely out of commission. The plexus was exposed by making a double division of the clavicle and reflecting the flap inward, and it was found the cut nerve-endings were in close approximation, and, therefore, the author believed that regeneration of the axones would take place. He approximated the cut ends very carefully, suturing them with fine catgut. Nothing else needed to be done. Sept. 27, 1911, he could use all the muscles except the long extensors of the fingers and thumb. Dec. 24, 1912, he had a full and complete extension of fingers and thumb. All of his arm muscles were normally active. He had great strength and a powerful grip.

This case establishes the definite principle that regeneration of axones can and will take place, with full restoration of function, if the approximation is done right. The divided ends must remain in contact until regeneration can take place. One must not be discouraged at the length of time before there is a return of function. In this case two years have gone by.

L. J. MITCHELL.

Sauvé and Tinel: The Operation of Franke (L'opération de Franke). *J. de chir.*, 1913, 2, 129.
By Surg., Gynec. & Obst.

The authors began their study of the operation of Franke, fully realizing that numerous reports of its non-success were due to its failure in reaching the pathological points which experimental and clinical anatomic observations have determined as the seat of tabetic crises. They justify their investigation of Franke's operation on the ground of its practical utility.

The first chapter of their article is a study of the clinical anatomic basis of the operation.

Of the three essential elements of tabetic crises, pain, vomiting and secretory disturbances, the most essential to be removed is the element of pain. In a comprehensive anatomical, physiological and pathological study, the authors show that the splanchnic nerve supplies to the stomach (1) vaso-motor fibres which come from the cord and traverse the root ganglion without interruption; (2) sensory nerve fibres whose origin is in the spinal ganglion and which enter the cord through the posterior root. It is in the course of the posterior root that the pathological process manifests itself. Thus the irritation acts simultaneously upon the intercostal nerves and the rami communicantes of the posterior roots the union of which forms the splanchnic. The pneumogastric is likewise composed of (1) a few sensory fibres to the stomach intermingled with those to the heart, larynx, and pharynx, and (2) motor fibres, the reflex irritation of which produces vomiting. Thus it is evident that as the pathological process is in the posterior root it is the posterior dorsal root which must be cut or its fibres destroyed in order to do away with the pain in tabetic crises.

The second chapter deals with the operation of Franke from the anatomic and experimental viewpoints.

The question whether or not the operation of Franke removes the spinal ganglion has been investigated:

1. By searching for the ganglion in the divulsed nerve, which gives uncertain results owing to technical difficulties. 2. By experiments on the cadaver, which are contradictory in results. Leriche and Cotte claim that the ganglion is removed; Sicard and LeBlanc that it is never even injured unless the costo-transverse ligament be cut, in which case the dura is also dangerously torn by divulsion of the nerve. Tinel and Sauvé agree with the latter. 3. The findings at autopsy, which show (a) that the operation of Franke anatomically never reaches the root and very seldom reaches the ganglion, yet (b) it is not anatomically useless because violent divulsion of a nerve trunk causes profound disturbances in the nerve cells through temporary chromatolysis, and it is reasonable that lesions of the ganglion cells produced in similar manner may cause or hasten the complete degeneration of the posterior root. The authors believe that this

alone explains the cures effected by the operation of Franke.

Most writers claim that the operation of Franke is "simple, easy and not dangerous." In the chapter devoted to the technique of the operation of Franke, the authors first consider the difficulties of the operation. These are, first, our insufficient knowledge of the anatomy of the posterior parts of the intercostal spaces; second, lack of precision in the number of nerves which should be divulsed. Physiologically from the fourth to the eleventh nerves should be divulsed, as the stomach derives its supply from the fourth to the tenth dorsal segments of the cord. But the authors do not quite dare to recommend divulsion of the fourth on account of the danger to the cardiac and respiratory reflexes; third, the difficulty in following the nerve to its point of origin. The dura is seldom torn in practice, a danger which LeBlanc and Sicard have observed upon the cadaver, also it is possible to go to the point of origin of the nerve. The authors' technique, unlike any other, makes it unnecessary to touch the costo-transverse ligaments, a good liberation of the transverse processes and an adroit manipulation of the grooved director sufficing; and it is even less necessary to cut the transverse processes as recommended by Mouriquand and Cotte; fourth, the difficulty in avoiding the pleura. It is not true, as contended, that injury to the pleura in this region is not serious.

The authors prefer to perform the operation at one sitting except (a) in very cachectic patients; (b) when a grave pneumothorax is produced; (c) when there exists on one side chronic pulmonary lesions which render the lung of this side functionally insufficient in case of pneumothorax of the opposite side. The patient is placed face downward upon the operating table with a pillow under the abdomen.

The operation: The incision is made opposite to, and three finger's breadths from, the fourth to the eleventh dorsal spines. The authors take as their landmarks a line drawn between the inner ends of the spinous processes of the scapulæ as the level of the third dorsal spine, and a horizontal line four finger's breadths below the angle of the scapulæ as the level of the eleventh dorsal spine.

The second step comprises the incision of the soft parts down to the longissimus dorsi muscle. The inferior insertions of the trapezius and the latissimus dorsi are cut in the axis of the incision.

The third step is the avoidance of the posterior perforating vessels by going through the fibres of the longissimus dorsi muscle.

The fourth step lays bare the transverse processes and the levatores costarum. The separated fibres of the longissimus dorsi are strongly retracted and the fine tendons of insertion of the levatores costarum are grasped with toothed forceps and cut close to the transverse processes. The tendons are pulled aside and expose at once the posterior intercostal spaces. Now the external intercostal muscle and the

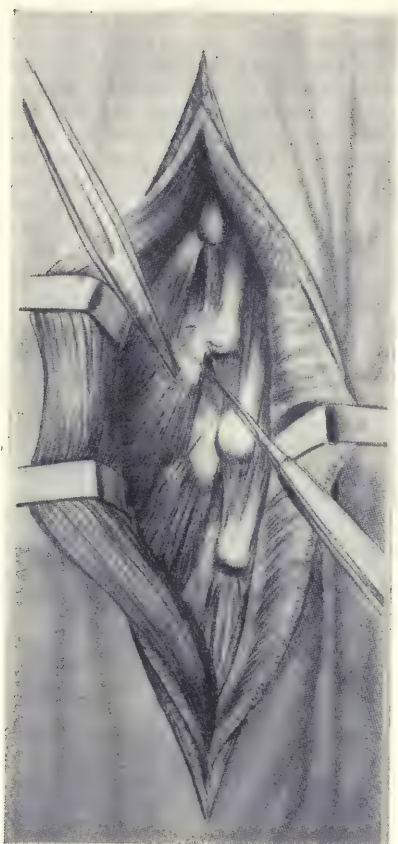


Fig. 1. Showing method of exposing and cutting the tendons of insertion of the levatores costarum muscle from the transverse processes.

external posterior intercostal membrane alone cover the intercostal vessels and nerve.

The fifth step comprises the incision of the external intercostal muscle and the external posterior intercostal membrane. The external intercostal is often lacking posteriorly and its fibres are at best so thin that it may be neglected. The pleura lies immediately beneath the fibres of the external posterior intercostal membrane, which is described for the first time by Sauv  and Tinel. This membrane extends from the costo-transverse-cervical ligament internally upward and outward to the angle of the rib and has a length of about two and one half centimeters. External to the posterior angle of the rib the intercostal vessels and nerve lie between this membrane and the intercostal muscle; internal to the posterior angle they lie between this membrane and the pleura (Fig. 1). In spite of all that has been written to the contrary, the authors claim that nothing is easier than to injure the pleura in this region. They expose the membrane by inserting a blunt dissector (Farabeuf's) at the mid-point of the intertransverse ligament

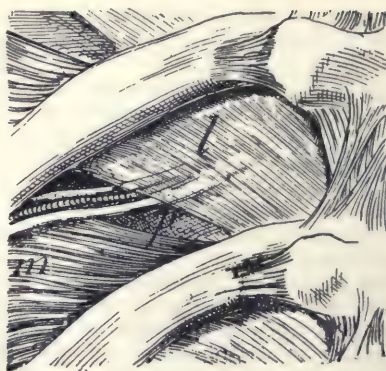


Fig. 2. l. posterior external intercostal membrane; m. internal intercostal muscle; p. pleura. The external intercostal muscle has been completely removed.

and pushing it outward to the posterior angle of the rib. The resistant membrane upon which the dissector lies is the external posterior intercostal membrane, which is exposed by cutting down upon the dissector and carefully raising the flaps (Fig. 2).

The sixth step is the exposure, section and divulsion of the intercostal nerves. The nerve is now seen crossing diagonally the intercostal space. It is gently raised from the pleura and cut. Then the proximal cut end is grasped with a toothed forceps, and with a grooved director is separated from its bed in the intertransverse muscles and ligaments until its point of junction is reached (Fig. 3). The central end of the nerve is next caught as deeply as possible with strong forceps. The nerve is twisted by turning the forceps and is torn out as abruptly as possible (Fig. 4). Franke and his followers recommend slow divulsion of the nerve (at least three minutes for each nerve); but the authors believe that the desired result, namely chromatolysis of the ganglion cells is best obtained by brusque divulsion, which has the added advantage of saving at least thirty minutes in time of operation.

The seventh step describes the repair and suture of the different planes. After repeating the preceding manoeuvre in each of the six intercostal spaces the muscular repair is easily accomplished with six or seven catgut sutures through the mass of the longissimus dorsi; the aponeurosis is closed with a second row of catgut sutures and a third row of sutures closes the skin. The authors always drain the lower angle of the wound because of the known lowered resistance of tabetics to infection. If a pneumothorax has been caused by opening the pleura in one of the intercostal spaces the opening is easily closed by suturing the large mass of groove muscle over this space.

The authors make a critical review of thirteen cases which they were able to collect in the literature, including their own three cases. Two of these thirteen cases died from causes ascribable directly to the operation; of the remaining eleven, two had

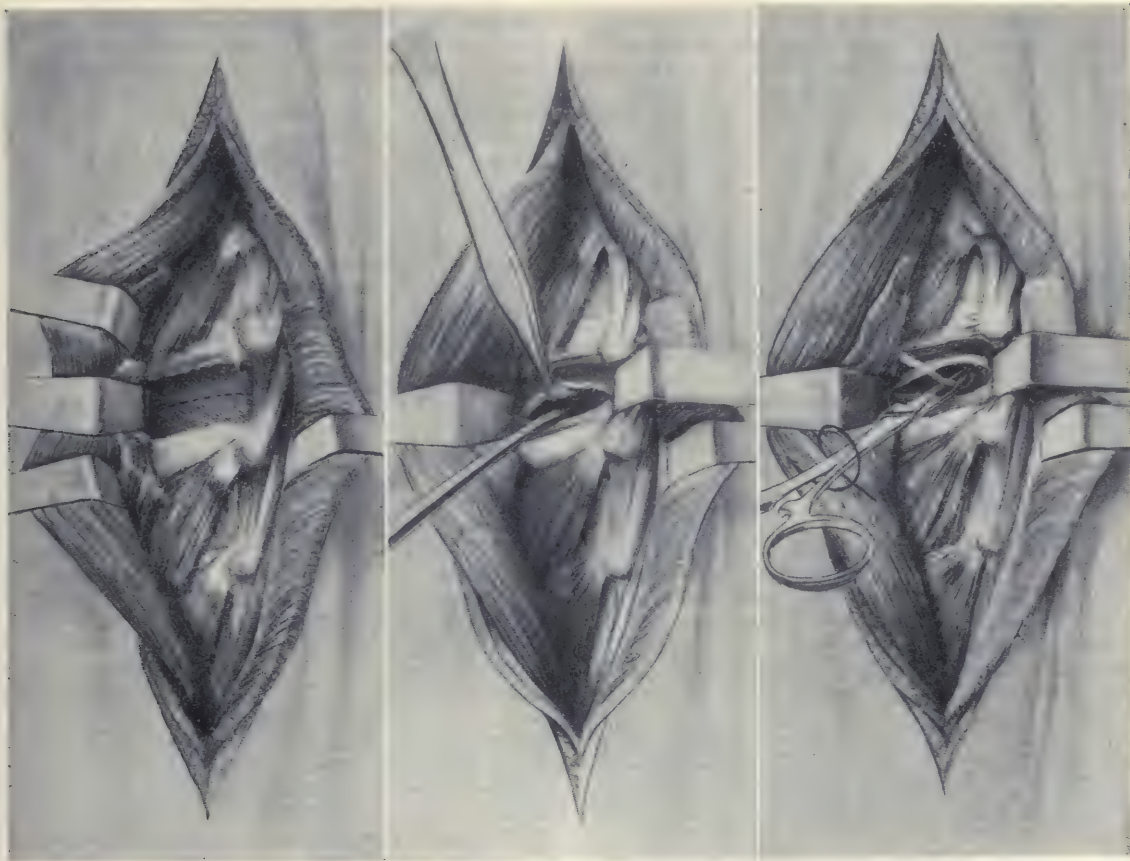


Fig. 3. Showing method of exposure of the posterior external intercostal membrane.

Fig. 4. Showing the intercostal nerve lifted from its bed

and the grooved director following it to its point of origin.

Fig. 5. Forceps applied to nerve: method of twisting employed in divulsion indicated by arrow.

immediate relapses; three had later relapses; five were cured but without any indication of the time elapsed since operation; one case has remained cured more than eleven months.

Comparing these results with results of other operations for the relief of tabetic crises, the authors were able to get reliable statistics only in the operation of Foerster. Their impressions are that the operation of Franke should have a mortality of about 7 per cent in spite of the 14 per cent of their collected cases. The reported cases of Foerster's operation give a mortality of 24 per cent, which the authors believe is too low because opening the subdural space alone gives a mortality considerably higher than these figures. From the point of view of efficacy the operation of Franke is incontestably inferior to that of Foerster. The former *may* succeed, while the latter *must* succeed provided enough roots and ganglia are removed. The same holds true of all other operations which attack the posterior root or ganglion, e. g., the operations of

Guleke, of Sicard and Desmarest, of Schueller. But the operation of Franke is very much easier than that of Foerster, which in turn is easier than that of Guleke. The operation of Sicard and Desmarest ranks between that of Foerster and Guleke in facility. In reviewing advantages and disadvantages of the operation of Franke, the authors conclude that it is the least efficacious of the operations for gastric crises but nevertheless can be successful; that it is the least dangerous and much the easiest. It should not be condemned and finds its indications.

The practical questions which arise in regard to the gastric crises of tabes and which Sauv  and Tinel answer in their general conclusions are:

1. Is it necessary to operate for the gastric crises of tabes? The crises are a symptom of *irritation* and a well founded objection to operative interference is the fact that the crises disappear spontaneously when the progress of the disease destroys the roots or the disease becomes arrested and the irritation ceases. As it is impossible to predict when

these favorable and non-operative results will take place, the authors believe that the operation is justified when the crises are severe, frequent, long and leading to cachexia, and after the lapse of some months show no tendency to spontaneous regression.

2. Which operation should be selected? If we accept the proposed pathogenesis of the crises as an irritation in the dorsal radicles, the operation of Franke is not rational unless by the operation as set forth in this article the rami communicantes and

the extremity of the ganglion are reached. Foerster's operation, the operation of Guleke and of Sicard and Desmarest are too dangerous to be recommended. Therefore, the operation of Franke should first be tried. If it fail, or if there are remissions, Sauv  and Tinel recommend simple ligation of the dorsal radicles. This procedure seems to suffice to interrupt the reflex arc which gains ingress to the cord from the spinal root across the irritated zone, and causes definite degeneration of the posterior roots.

ELLIS FISCHEL.

DISEASES AND SURGERY OF THE SKIN AND APPENDAGES

Korneff: Free Fascia Transplantations; Experimental and Clinical Investigations ( ber die freie Fascientransplantation; experimentelle und klinische Untersuchungen). *Dissertation*, St. Petersburg, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has undertaken fifty experiments on dogs and cats to illustrate the pathological and anatomical changes in transplanted fascia. The experiments may be grouped in three series. Thirty-three experiments are concerned with the substitution of Achilles tendon defects with fascia lata. Defects of the thorax wall were covered over twelve times and abdominal wall defects five times. From the first series the following conclusions can be drawn: The "fascia muff" which connects the end of the resected Achilles tendon, at first serves very reliably for good union. Thereupon the tendon defect begins to be replaced by young connective tissue, which proliferates around the transplanted fascia from all sides and supplies it with blood vessels. The surrounding connective tissue gradually acquires a tendinous character and at the end of the second month is distinguished from the old tendon merely by its greater richness in cells and the irregular arrangement of its fibres. Macroscopically, its glistening appearance is missing and it is thicker than the normal tissue. Gradually these differences disappear. The nuclei of the fascia lose their staining properties at first, due to the insufficient nutrition. At the end of the third week already, the number of nuclei is increased simultaneously with the vascular new formations. Transverse fascia bundles disappear after three weeks, thanks to the inactivity, while the longitudinal fibres become tendinous and at the end of the third month all difference have disappeared. The elastic fibres are always well preserved.

In a second series (twelve experiments) defects in the wall of the thorax were covered with free, transplanted fascia. For this purpose large four-cornered defects were produced by means of rib-resection and removal of musculature and pleura and were closed in the way given. The author, who has been the first to try such experiments, has tried in this series wherever possible to give results only after long

periods. The animals were killed after 10 to 12 months. In seven out of twelve dogs a complete success was achieved. Two dogs died of shock. The artificial defect measured about 6x8 cm. From this series the author draws the following conclusions: Large thoracic wall defects can be closed splendidly with freely transplanted fascia lata. The transplanted fascia is surrounded on all sides by scar tissue, which nourishes the transplant. The scar tissue gradually becomes flatter and firmer. If the pleura does not become infected, no adhesion of fascia to lung takes place. The transplant is covered on its inner side with flat pleural endothelial cells. Young connective tissue and vessels proliferate into the profascial and endofascial layers, which lose their primary structure. The true fascia bundles, however, do not alter their structure even after one year. The proliferation of the elastic fibres reaches a maximum in 3 to 4 months. After a year their number returns to normal.

In the third series, peritoneal-muscle defects of the anterior abdominal wall were covered with freely transplanted fascia, thereby testing Kirschner's results (5 experiments). The author found that such defects can be perfectly covered with free transplantation of fascia. Even in those cases with a superficial wound infection, no bulging of the abdominal wall could be found after five months.

In the clinical part of the work there is at first a critical discussion of the eighty cases found in the literature. Free fascia transplantation was employed most frequently in defects of the dura (26 times). Abdominal wall defects were closed fifteen times by this method and ankylosed joints were mobilized thirteen times. Defects of hollow organs were closed ten times, and three times the artificial intestinal stenosis of Bugoljukoff was attempted. The remainder of the cases comprise plastic operations on muscle, etc. The author's personal material includes eighteen cases, among which are twelve cases of large inguinal hernias, five being recurrences. Further there was one case, respectively, of hernia cruralis, hernia pulmonalis, pleural defect after a stab wound, prolapsus recti (fascia ring of Brunn) cryptorchism and ankylosis of the jaw. Noteworthy are the cases of closure of pleural

defects, which succeeded splendidly. This method is applicable to all cases in which suture is not possible. It seems especially valuable after resection of tumors of the breast wall. In rectal prolapse, also, the fascia-plastic method of Brunn is an excellent method. In cryptorchism the author proposes the following procedure: The testicle is pulled through a 9x4 cm. sized piece of fascia and the incision in the latter narrowed by suture. The fascial sack is fixed in the scrotum. Most effective is the case of complete ankylosis of the jaw according to Scharlach. By the interposition of free, transplanted fascia function is restored. This method technically is much simpler than the complicated muscle interposition according to Helferich and v. Miculicz and is to be preferred for this reason. In the author's eighteen cases only one failure is to be recorded because of suppurative of a scrotal hæmatoma. Muscle hernias at the site of extirpation of the fascia were not observed. The author proposes free fascia transplantation as the method of choice in crural hernias because of the danger of recurrence.

HESSE.

Stern: The Grafting of Preserved Amniotic Membrane to Burned and Ulcerated Surfaces Substituting Skin Grafts. *J. Am. M. Ass.*, 1913, lx, 973.

By Surg., Gynec. & Obst.

The technic of fixing and preserving the grafts was suggested to the author by Carrel.

The freshly obtained amniotic sac in part or in its entirety is immediately placed in petrolatum, after being washed of all blood in normal saline solution and dried between layers of sterile gauze. Liquid petrolatum serves well when a specimen is to be cut many times and used up within a few weeks. The receptacles are stored on or near ice as soon as possible, and maintained at a temperature between minus one and plus seven centigrade (30.2 and 44.6 F.). The color and consistency remain normal for several weeks, the microscopical appearance of the arteries unchanged for seven to ten months.

Surfaces are prepared as carefully as for skin grafting. A section of the graft is spread smoothly, care being taken to press out all air bubbles. The amniotic or glistening side is placed in apposition to the wound. Wax (a mixture of paraffin, beeswax, and castor oil) having been warmed to just the degree to liquify, is now applied with applicators. A fresh applicator is used for each dip, to prevent contaminating and disturbing the grafts. An outer dressing of cotton and bandage is all that is necessary for protection and absorption.

After two days, when the dressing is removed, the outer layer of the amnion comes away with the wax, leaving the inner layer closely applied to the wound.

Cases of ulcers, burns and scalds, and traumatic denudations were treated thus with remarkable result — best in a case of traumatic denudation.

The method should commend itself, if it does as well as skin graft, for it obviates the necessity for

anæsthesia and the production of a secondary wound with no certainty of the outcome for their justification.

H. W. KOSTMAYER.

Strauss: Copper in the Treatment of Cutaneous Tuberculosis (Zur Kupferbehandlung der äusseren Tuberkulose). *Deutsche med. Wchnschr.*, 1913, xxxix, 503. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This article advocates the continuation of the chemotherapy of lupus. After the author had seen cases of marked improvement in cutaneous tuberculosis from the injection of copper preparations into the blood, he began to use it locally also, with the object of getting results more quickly. He believes that copper preparations applied locally not only have a caustic action, but that they exercise a specific effect on the tubercle bacilli. He believes that in the new copper compounds, especially in a new combination of lecithin and copper and also in iodized methylene blue, we have means of successfully combating mild and moderately severe cases of tuberculosis as an infectious disease, and that this can be done without injury to the individual, which is not the case in the tuberculin treatment. Pictures are given of several cases cured of cutaneous tuberculosis.

BRANDES.

Mackee and Remer: Massive Dose X-ray Treatment of Cutaneous Epithelioma. *N. Y. M. J.*, 1913, xcvi, 633.

By Surg., Gynec. & Obst.

The advantages of a single massive dose over small fractional doses of X-rays in treating epithelioma are: (1) greater accuracy in measuring the dose, (2) fewer visits of the patient for treatment, (3) less total quantity of X-rays, and (4) better success in treating recurrences.

To obtain the same effect on an epithelioma by fractional doses as by massive doses a much larger total quantity of X-rays is required so that to produce the stage of erythema a single ample dose has the efficiency of several divided doses whose combined intensity is considerably greater. At the same time the deleterious effects on the skin and its blood vessels is far greater with the fractional doses. In case of recurrences the resultant condition after fractional methods is very resistant to radio-therapy; not so after massive exposure.

Accuracy in measuring the dosage is obtained for ray quantity by Holzknack's radiometer and for ray quality by the Benoist scale. Benoist 5 or 6 is used for most superficial lesions with Benoist 7 or more for deeper growths, aided by a suitable filter. The radiometer and penetrometer method gives a direct reading of quantity and quality on all types of X-ray equipment while the milliampere-minute method is inconstant on account of the variance in milliampere reading with different types of inductor.

The approximate dose is carefully estimated for each individual case and applied with all the accuracy that the measuring instruments afford. If the estimated dose is larger than is usually re-

quired to produce a moderate erythema it should be administered in more than one séance, remembering, however, that any two divided doses do not produce the same total effect of a single dose equal to their sum. If after a massive treatment resulting in erythema no beneficial effect is seen in one month the case should pass to the surgeon. If improvement follows without apparent cure a second and even a third massive dose is justifiable.

HOLLIS E. POTTER.

Mitchell: Surgical Aspects of Purpura. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Hæmorrhagic tendency deserves a high place in consideration of factors for safety in surgical operations. Hæmophilia, jaundice, and purpura represent three types of pathologic hæmorrhage. Purpura is of greatest interest because of its many

variations, the possibility of confusion in diagnosis, and its complications which may demand operation. Henoch's purpura is the type with which we are most concerned. Autopsy data do not offer complete explanation of the abdominal symptoms. Five cases are reported in which the diagnosis was questionable. A review of the recent literature shows that visceral complications may be serious, and that intussusception is the most frequent and most serious lesion. There are reports of nineteen laparotomies, in eight of which intussusception was demonstrated and three intussusceptions went unoperated. There were no deaths from exploratory operation. The operative reports give a full explanation of the abdominal crises. The efficacy of the injections of serum has been well shown. Operation in the course of the disease, as shown by the results, is not greatly to be feared.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESES, ETC.

Robertson and Burnett: The Influence of Lecithin and Cholesterin Upon the Growth of Tumors. *J. Exp. M.*, 1913, xvii, 344. By Surg., Gynec. & Obst.

The authors investigated the influence of injections of lecithin and cholesterin on the rate of growth of tumors in white rats. The growth used was the Flexner-Jobling carcinoma, inoculated into the axillary region. Rats from two sources were used and two specimens of tumor were obtained for the original inoculations. Injections were made directly into the tumor mass and were begun on the 20th and 19th days after inoculation in the two series.

It was found that cholesterin, whether suspended in dilute alcohol or in sodium oleate solution, produced a marked acceleration of both the primary and the metastatic growth, and that the acceleration of the primary tumor was most marked in the pre-metastatic stage.

Lecithin, on the other hand, when injected in the form of an aqueous emulsion directly into the primary tumor, diminished the tendency to form metastases, retarded the rate of the metastatic growth when it did occur, and, in some instances, retarded the primary growth. The retardation was most marked in the metastatic stage.

It was also noted that simultaneous injection of m/6 strontium chloride solution did not appreciably affect the action of the lecithin.

JAMES F. CHURCHILL.

Fleisher and Loeb: Transplantation of Tumors in Animals with Spontaneously Developed Tumors. *Tr. Am. Ass. Pathol. & Bacteriol.*, 1913, May. By Surg., Gynec. & Obst.

The large majority of all experiments in transplantation of tumors were carried out on normal

animals. It was apparently tacitly assumed that the condition existing in normal animals or in animals with an inoculated tumor on the one hand and in animals with a spontaneous tumor on the other hand were identical. The first experiments in which tumors were transplanted into animals with spontaneous tumors was reported by Loeb about eleven years ago. Loeb found at that time that pieces of an adenoma of the mammary gland of a white rat could be transplanted very much more easily into a rat in which a tumor originated than in other rats. Later Loeb and Leopold found a similar condition to prevail in a dog having a mixed tumor of the breast in which pieces of tumor could be easily inoculated, while the tumor could not be transplanted into other animals. It was especially noteworthy in both these series of transplantations that the transplanted pieces remained alive in toto, in the animal in which the tumor had existed spontaneously, while in other individuals the whole transplanted piece or at least its center became necrotic. Loeb also reported later a few observations in mice which seemed to point to the conclusion that mice in which a tumor had originated spontaneously were more liable to form a good soil for the growth of spontaneous tumors of other mice than normal mice without spontaneous tumors. The authors had, however, made only very few observations concerning this point and their conclusion in this respect was only a tentative one.

The results of their experiments carried out within the last two and one half years are sufficiently definite to permit the conclusion that in mice with spontaneous tumors there is a factor present which permits tumors in general to grow better than in mice in which no spontaneous tumors had developed. There is, therefore, intimately connected with the development of a spontaneous tumor in an animal, a condition which favors tumor growth in general.

There is, however, another conclusion to be drawn from these results. Inasmuch as the percentage of cases in which tumors grew in the same individuals in which they originated is considerably greater than the percentage of growth in other individuals with spontaneous tumors, we must assume that the great facility with which tumors grow in the individual in which they developed spontaneously is due to two factors. First, the factor which the authors mentioned, namely, the presence of a condition favoring tumor growth in general in animals affected with a spontaneous tumor; and secondly, a condition not specific for tumors but applying to other tissue as well, namely, a condition which favors the growth of certain animal tissues in the individual in which the tissue originated as compared with the growth of the same tissues in other individuals of the same species. This latter fact is evidently due to a chemical adaptation existing between the physical-chemical character of the body fluids and the composition of the tissue.

Investigation of the growth of transplantable tumors, which are apparently less sensitive to the lack of this specific adaptation between tissue and body fluids than the large majority of ordinary tumors, shows that it grows in mice with spontaneous tumors not quite as well as in normal mice, especially if such an ordinary transplantable tumor is investigated under conditions in which its virulence has been experimentally decreased. Such material, however, grows better in mice with spontaneous tumors than in mice in which one of the ordinary rapidly proliferating transplantable tumors is growing. In all probability the spontaneous tumors call forth some immune reactions which are not present in normal mice, but they call forth immune reactions of less intensity than the rapidly growing, ordinary transplantable tumors. Furthermore, the fact has been established that those mechanisms which lead to an inhibition of growth in normal mice through an inoculation with a surplus of tumor or through a previous or simultaneous injection with spleen tissue are also operative in mice with spontaneous tumors and approximately to the same extent as in normal mice.

Warthin: Heredity with Reference to Carcinoma as Shown by the Study of the Cases Examined in the Pathological Laboratory of the University of Michigan During 1895-1913. *Tr. Ass. Am. Physicians*, 1913, May.

By Surg., Gynec. & Obst.

This paper gives a statistical study of the records of the Pathological Laboratory of the University of Michigan during the years 1895-1913, in which period 3600 cases of neoplasm were studied for the purposes of practical diagnosis. Of these 3600 cases, 1600 were cases of carcinoma. This material, in about 90 per cent of the cases observed, was taken from the general population of the state of Michigan. The University Hospital being a state hospital and not a charity one, gives a much more representative

population than is usually found in charity hospitals of the large cities, and the possibility of obtaining a family history is therefore much better than in the latter case. In about fifteen per cent of all the cases in which a family history could be obtained (1000 cases), a definite family history of carcinoma was given. In a number of families studied, six in number, in which all of the members for three generations, both cancerous and non-cancerous, were included, a most striking family susceptibility to carcinoma was shown. In addition to these carcinomatous families, the author presents a study of carcinomatous fraternities; that is, families in which a complete family history is not obtainable but in which for two or three generations of given family groups a distinct susceptibility to carcinoma is shown.

As the result of these studies, the author concludes that the study of a large number of cases of carcinoma yields isolated but striking examples of a marked family occurrence through several generations; and a much more frequent family group or "cancerous fraternity" occurrence. From such histories it is hardly possible to draw any other conclusion than that a definite cancer susceptibility exists in certain families. The great frequency of association with tuberculosis might be taken as an evidence of a general weakened resistance on the part of these family lines; and this conclusion is supported by the extinction of many of these lines through a lessened fertility.

In the study of all of our neoplasm material a family susceptibility is occasionally shown in the case of angioma, lymphangioma, fibroma, neurofibroma, lipoma, myofibroma of uterus, adenoma of breast, and adenoma of thyroid; but extremely rarely in the case of sarcoma.

1. A marked susceptibility to carcinoma exists in the case of certain family generations and family groups.

2. This susceptibility is frequently associated with a marked susceptibility to tuberculosis, and also with reduced fertility.

3. The multiple occurrence of carcinoma in a family generation practically always means its occurrence in a preceding generation.

4. The family tendency is usually more marked when carcinoma occurs in both maternal and paternal lines.

5. Family susceptibility to carcinoma is shown particularly in the case of carcinoma of the mouth, lip, breast, stomach, intestines and uterus.

6. In a family showing the occurrence of carcinoma in several generations there is a decided tendency for the neoplasm to develop at an earlier age in the members of the youngest generations. In this case the neoplasm often shows an increased malignancy.

7. Because of the difficulty of obtaining complete family records the laws of inheritance of carcinoma susceptibility cannot be determined accurately, and it is highly desirable that investiga-

tions of large family records should be made relative to the occurrence of carcinoma susceptibility. In Levin's study of cancerous fraternities in connection with the whole family history the percentage of the cancerous members in each cancerous fraternity corresponds very closely to the Mendelian percentage of members with recessive unit-characters in a hybrid generation. The same conclusion might be drawn from the author's cases in certain instances, but it does not seem to him that the data are sufficient for such conclusions. Levin does not consider this conclusion as final, and also concludes that resistance to cancer is a dominant character whose absence creates a susceptibility to cancer. While some of the author's cases show family history suggesting this, others would indicate a progressive degenerative inheritance—the running-out of a family line through the gradual development of an inferior stock, particularly as far as the resistance to tuberculosis and cancer is concerned.

Levin, as well as Williams, noted the family tendency to specific localization of the cancer, particularly the uterus in the female members. This is well shown in the author's family histories and in some of the cancerous fraternities. Levin concludes that the most important result of his investigation is the fact that it shows the presence of an inherited resistance to cancer growth. Warthin would put it in just the opposite way and say that his observations are important in that they show in certain families an inherited susceptibility to cancer. If the majority of the human race do not show this susceptibility, resistance to cancer is a normal trait of the species. An increased susceptibility becomes, therefore, the abnormal character of importance, and investigations should be carried along the line of attempting to determine just what lies back of this susceptibility.

Levin: The Mechanism of Metastasis Formation in Cancer. *Tr. Am. Ass. Path. & Bacteriol.*, 1913, May.
By Surg., Gynec. & Obst.

The author describes a series of experiments with an inoculable sarcoma and carcinoma of the white rat in which the formation of metastasis was induced artificially. In one series of experiments the tumors were inoculated subcutaneously and then subsequently into an organ: liver or spleen. In those animals in which the tumors grew subcutaneously they also grew in the organ, or in other words the artificial production of a metastasis was successful. When the subcutaneous inoculation failed, the subsequent inoculation into an organ was also a failure.

In a second series of experiments the subcutaneous inoculation was followed by simultaneous inoculations into two organs: liver and spleen. The results were identical with the first series inasmuch as the inoculations into the organs failed when the subcutaneous inoculations failed. But on the other hand, when the subcutaneous inoculation was successful then in a certain number of animals the

subsequent inoculation was successful in both organs, while in other animals it succeeded only in one organ and failed in the others.

In the third series of experiments the subcutaneous tumors were removed surgically and then the same tumors were inoculated into one or two organs. In these experiments when the removal of the subcutaneous tumors was radical then the inoculation into the organs failed. When the subcutaneous tumor recurred, then the inoculation into the organs was successful, and again when simultaneous inoculation into two organs was done, then the tumor grew either in both or only in one organ.

The author concludes from the results of this experimental study that the growth of a metastasis depends upon the same conditions as the growth of the original primary tumor and that they both depend upon an interaction between the malignancy of the cancer cells on one hand and the condition of general or local susceptibility or resistance against tumor growth of the organisms of the animal.

Heyde and Vogt: Studies on the Effect of Aseptic Surgical Tissue Necrosis and Researches on the Causes of Death from Burns (Studien über die Wirkung des aseptischen chirurgischen Gewebeszerfalls und Versuche über die Ursachen des Verbrennungstodes). *Ztschr. f. d. ges. exp. Med.*, 1913, i. 59.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This very complete work offers new and interesting viewpoints on the causes of death from burns and on the causes of death after unilateral nephrectomy. On the basis of numerous and varied experiments the authors concluded that burned native tissue may act like foreign tissue. In favor of the view that a sufficiently large burn of the third degree may put the organism into a kind of permanent sensitization is the observation that experimental animals may be kept alive by excising the burned area. There is also the possibility of affecting animals who have not received any burn by the transplantation of burned flaps in just the same way as if they themselves had received a severe burn. Heyde and Vogt also succeeded in demonstrating in the urine of these transplantation animals the same toxic principle that occurs in the urine of the burned animals. In reference to this toxic principle, the results showed that a substance can be secured from the urine of burned and even of normal human beings which produces extremely characteristic phenomena and affects animals with a perfectly definite disease-complex, consisting of motor irritability, cramps, high grade dyspnoea, to which are added the well-known symptoms of anaphylactic shock, such as hawking, spitting, chewing, and loss of urine and faeces. Section of these animals in the acute stage shows hyperaemia of the gastro-intestinal tract, absence of coagulation of the blood and leucopenia. In searching for the urinary toxin, Heyde and Vogt succeeded in producing the typical picture of this intoxication with guonidin preparation. As the

chief results of their researches the authors designate the demonstration of a well-defined chemical body of low constitution which can provoke the symptoms occurring in anaphylactic shock and after the action of the toxic urinary principle in burns. They also demonstrated that the toxicity of such substances diminishes the higher it is constituted. Thus neither a fever-producing nor a toxic action could be obtained from the pure albumen. As a practical result of their researches the authors recommend wherever possible the excision of the burned area in burns of the third degree, the protection of the body from loss of water from the wound, the treatment of the patient with CaCl_2 solution and finally atropine in large doses. By applying the results of their animal experiments on the causes of death after unilateral nephrectomy to the experiences of human pathology, Heyde and Vogt concluded by analogy that the uræmic coma occurring after kidney operations for a previously unilateral disease was frequently not of a reflex, but of toxic nature.

LEUENBERGER.

Bloodgood: The Diagnosis and Treatment of Border-Line Pathological Lesions. *Tr. Am. Surg. Ass.*, May, 1913. By Surg., Gynec. & Obst.

By border-line pathological lesions Bloodgood means those in which it is difficult, clinically, or from the gross appearance, or from the frozen microscopic section, to come to a definite conclusion as to whether a lesion is benign or malignant.

The earlier after the first symptom patients present themselves for treatment, the greater will be the number of these cases in which the diagnosis will present difficulties. In this stage the prognosis after proper treatment is best.

It is the author's opinion that there is sufficient experience at hand at the present time to allow one to formulate definite conclusions as to the proper method of diagnosis and treatment in this stage in which the result should be the best.

Incomplete removal of any malignant disease in its earliest stage gives much worse results than complete removal in a later stage. This fact must be always borne in mind.

Incomplete removal of a distinctly benign lesion, with the exception of the angioma, is always followed by the re-formation of the tumor from the residues left behind, and the chances of malignant change in these residues are greater than in the undisturbed benign lesion. This fact should also be kept in mind.

These border-line pathological lesions, from the standpoint of diagnosis and treatment, can be divided into three great groups.

GROUP 1. In this instance the complete excision of the palpable nodule can be accomplished without danger and without mutilation, so that after its removal it makes little difference what the microscope shows—the proper operation has been done.

GROUP 2. Here also the complete excision of the nodule can be accomplished without danger of mutilation, but there is a possibility that the lesion

may be a carcinoma of a type in which, experience has demonstrated, the neighboring lymphatics should also be radically extirpated.

GROUP 3. In this series the diagnosis of malignancy would indicate a more radical operation with mutilation and, in some instances, increased dangers from the operation, while if the lesion were still benign a cure could be accomplished with less or no mutilation and less danger.

From the author's investigations he is confident that there is sufficient evidence to indicate to the surgeon the proper operation in each group with best results for the patient.

In the first place, the surgeon must have the easily available knowledge of the different pathological processes which may occur in definite localities. He must be familiar with the methods of the diagnosis of the lesion in this special region and the nature and extent of the operation which promises the best results.

The diagnosis as to the proper treatment rests upon, first, a careful study of all the available clinical evidence. In some cases this is sufficient to indicate the proper treatment without a gross or microscopic investigation. The author thinks this is true for palpable masses in the stomach and colon. The resection of such masses without an investigation of their gross and microscopic pathology by cutting into them yields the best results with the least mutilation and danger. If the pathological examination after their removal shows a benign lesion, the patient is protected from the later development of cancer; if, on the other hand, it should prove to be malignant the chances of a cure are best.

As examples of Group 1 may be mentioned benign pigmented moles, warts, small subepidermal nodules, and subcutaneous, more or less encapsulated tumors.

In the second group may be mentioned a lesion on the lower lip. Here the lesion may be radically excised with a V-shaped piece without danger or mutilation; the wound may be closed. Then a frozen section is made and if it proves to be carcinoma of the spinocellular type, the glands under the jaw should be completely removed through a separate incision. This operation in two stages and without continuity dissection has been demonstrated to fulfill all the requirements. With an early lesion on the tongue the method is entirely different, because for the malignant nodule or ulcer the local operation must be more extensive. In a case of this kind, under general or local anæsthesia, the palpable area is excised with the cautery and immediately studied under the microscope in a frozen section. If the section shows carcinoma, then the more radical operation must be proceeded with at once.

As an example of Group 3, a lump in the breast may be used—one in which a clinical diagnosis is impossible. The surgeon cuts down upon a lump. In the majority of cases the differential diagnosis between benign and malignant is best indicated by the gross findings. In many instances the frozen sec-

tion is more difficult to interpret than the gross pathological picture. In a few instances the frozen section is helpful, for example, between an intracranial myxoma and a medullary carcinoma.

The next important question to answer is, what shall a surgeon do when in doubt after he has exhausted clinical, and gross and microscopic pathological investigation? It is the author's opinion that we have sufficient evidence to answer this question. It rests upon the knowledge of the frequency of malignant disease in the different regions and the results of radical treatment. In the breast, the complete operation for cancer should always be performed for any lesion in a woman over twenty-five unless the benignity of the lesion is established. The complete operation should follow immediately upon the exploratory incision. This conclusion is based upon the fact that the mutilation of the complete operation is but slight, the additional danger is little if any, while the probabilities of a cure when the malignant tumor is subjected to complete operation in this doubtful stage is eighty per cent or more; on the other hand, when the operation is done in two stages the chances of a cure are reduced to almost nothing.

In bone lesions the mutilation of amputation is so great and the chances of a cure of any doubtful lesion (should it prove malignant) are so slight that the most conservative operation should always be chosen. This is also true for doubtful lesions in the nasopharynx and antrum, on the alveolar border of the jaw, and in the body of the lower jaw.

Bloodgood feels confident that if surgeons will carefully investigate these lesions clinically, scrutinize their gross appearances and look at the frozen sections, and keep a check on their results up to date, they will soon be in a position to meet the requirements of the diagnosis of these border-line pathological lesions, inasmuch as immediate treatment based upon this investigation will lead to a removal of the lesion, giving the patient the best opportunity of a cure with the least mutilation and danger.

SERA, VACCINES, AND FERMENTS

Leschke: Contribution to the Serum Diagnosis of Tumors (Beiträge zur serologischen Geschwülst-diagnostik). *Beitr. z. klin. d. Infektionskrankh. u. z. Immunitätsforsch.*, 1913, i, 271.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The contribution consists of a report on extensive experiments to demonstrate complement fixation constituents in the serum of cancer patients. Washings of cancer cell emulsions, lactic acid solutions, methylalcohol extracts and antiformin solutions of carcinomatous tissue, sarcoma of man and rats, pancreas of man and calves, as well as spleen and liver were used as antigen. Of sixty-one tumor cases, in only six did the sera give negative reactions with each antigen. In 90.2 per cent the sera were positive with the various antigens. In a series of one hundred forty-three patients, sick with other diseases, only 17.5 per cent gave positive reaction. The best

results were obtained with the antiformin solutions: 88.6 per cent positive reactions in tumor patients, and only 7.6 per cent in those sick with other diseases. Of the latter group, 78.6 per cent gave positive Wassermann tests. The reactions are dependent upon the lipoids, and it is a question of reaction between antilipoid substances and the lipoids of the antigen. Further tests with the cancer cell reactions of Freund and Kaminer resulted in positive reactions in 54.1 per cent of tumor patients (series of fourteen cases), 48 per cent of patients sick with other diseases (twenty-one cases), and in 0 per cent normal individuals (eight cases). The results are not uniformly convincing, but this should not exclude the method, since with a refinement of the technique it may produce results of practical value.

VON GRAFF.

Weil: Nature of Anaphylaxis and Relations between Anaphylaxis and Immunity. *J. Med. Research*, 1913, xxvii, 497.

By Surg., Gynec. & Obst.

In spite of the striking difference between the manifestations of anaphylaxis and of immunity, there are many facts which indicate that they are closely related phenomena. Thus, a guinea-pig, by virtue of a single injection of an alien proteid, becomes hypersensitive towards that proteid, but, by frequent repetition of the same, becomes immune thereto. An immunized guinea-pig, on the other hand, possesses a serum which, when injected even in minute amounts into a normal guinea-pig, renders the latter highly hypersensitive to the specific antigen in question. The author discusses the two important theories in which attempt has been made to unify the phenomena of anaphylaxis and of immunity, and to explain them upon a single basis. The first of these maintains that the anaphylactic reaction is intracellular; the second, which has now very largely displaced the former in the literature, maintains that the reaction is entirely humoral. The difference between these two conceptions is, as Weil states, fundamental, and the determination of the correct view is of first importance for the whole subject of immunity. He then considers each of these theories briefly, namely the cellular and the humoral.

It therefore seemed important to the author to verify experimentally the conception that the incubation period necessarily accompanies passive sensitization. An experiment was therefore planned in such a manner that a series of animals received a wide range of combinations of these two factors — antigen and antibody being given simultaneously; in another series the same combinations were employed, but the injections of antibody and of antigen were separated by a time interval. In the former case anaphylaxis failed to supervene; in the latter, it invariably occurred. His study has been exhaustive and covers a very wide range. His experiments seem to demonstrate that immunized animals are also potentially anaphylactic. In the terms of

the theory herein supported their body cells contain sessile receptors, or anchored antibodies, in sufficient number to produce an anaphylactic reaction, but are protected by the free antibodies of the serum.

Summary of experiments: 1. It has been impossible to produce anaphylactic shock in guinea-pigs by injecting antigen and antibody simultaneously. For sensitization to occur, an interval of time must elapse between these two injections.

2. No qualitative changes have been shown to take place in the introduced immune bodies during this interval.

3. Quantitatively, it has been shown that there is a marked diminution in the circulating antibodies in the blood during this interval.

4. It has been shown that, in spite of the disappearance of the antibodies from the blood, they persist in the body, as is shown by the persistence of the induced anaphylactic state.

5. By previously saturating the guinea-pig with normal rabbit serum, it has been possible to prevent sensitization by means of immune rabbit serum.

6. Guinea-pigs that had been either actively or passively sensitized were protected against anaphylactic shock by introducing into their blood large amounts of immune body.

7. Guinea-pigs that had been immunized, in the popular acceptance of that term, by the frequently repeated injection of antigen, were shown to be potentially anaphylactic.

CONCLUSIONS

Anaphylaxis is due to the reaction between specific antibodies present in the cells and the introduced antigen.

In passive sensitization, the body cells absorb the introduced antibodies from the blood, and the animal is thus made anaphylactic.

The function of immune bodies present in the serum is to neutralize the introduced antigen, and so to protect the body cells.

The anaphylactic animal regularly contains in his circulation an insufficient quantity of antibodies to protect his body cells.

The immunized animal is potentially anaphylactic. His body cells possess anchored immune bodies, but are protected by those in circulation.

Exactly the same antibodies are present in anaphylaxis as in immunity. In the former they predominate in the cells; in the latter, in the serum.

GEORGE E. BEILBY.

Robinson and Auer: Cardiac Disturbances in the Dog During Anaphylaxis. *Tr. Ass. Am. Physicians*, 1913, May. By Surg., Gynec. & Obst.

Dogs sensitized by the subcutaneous injection of horse serum were examined at intervals (22-62 days) with the electrocardiograph. The animals were kept under light ether narcosis by intratracheal insufflation, the blood pressure read by means of a mercury manometer connected with the carotid artery and the electrical variation of the heart led

off from the right front and left hind leg. The toxic injection of horse serum was 20 cc. and was always injected into a jugular cannula.

Twelve dogs were used, and of these six gave outspoken changes in the electrocardiogram. Four of these showed a qualitative identity in the changes recorded: the R wave gradually diminished, while the S and T waves increased greatly in size; the P-R interval was increased in all four cases. In one of these a partial heart-block of varying degree developed which disappeared twenty-nine minutes after the serum injection.

In the fifth dog partial heart block was obtained again, but this time without any such striking change in the general form of the complexes as have been described.

The location of the source of these disturbances is probably peripheral, in the heart itself, because the changes were also obtained after section of the vagi in the neck.

The drop in blood pressure which is so characteristic of anaphylaxis in the dog (Biedl and Kraus) cannot be considered the cause of these cardiac disturbances because a number of the sensitized dogs examined showed a profound drop in blood pressure without any change practically in the form of the complexes. Moreover, when the blood pressure was suddenly lowered by amyl nitrite, sodium nitrite, or by section of the splanchnic nerves, the electrocardiograms again showed practically no alteration.

After the heart recovered from these anaphylactic changes the reinjection of the same dose of horse serum caused no change in the character of heart beat (anti-anaphylaxis).

The results demonstrate clearly that the heart of dogs may show profound temporary pathological alterations due to serum anaphylaxis. These results may possibly aid in explaining certain cardiac disturbances in the human subject.

BLOOD

Bond: The Mucous Channels and the Blood Stream as Alternative Routes of Infection. *Brit. M. J.*, 1913, i, 645. By Surg., Gynec. & Obst.

The article takes up the question as to whether the organisms which bring about infective diseases of the liver, kidney, gall-bladder, the urinary bladder, mammary, salivary glands, etc., reach their respective structures through the blood stream or by the mucous channels of these structures communicating with the body surface. Aside from the blood and lymph, three ways are open for a disease organism to gain entrance to a secreting gland: (1) The organism may be motile; (2) it may be passively transported by muscular or peristaltic action; (3) it may be spread over the surface of the mucous membrane by growth, as a diphtheria membrane. Bond says he has previously demonstrated that particles of indigo can be carried along mucous canals and gland ducts in a direction opposite to that

taken by the normal secretion. For this, certain conditions must be fulfilled: (1) There must be a reversed mucous current along the channel; (2) there must be some stasis of the normal secretion or excretion in the duct; or (3) a fistulous communication must exist at the proximal end of the canal by which the contents can reach the surface of the body without passing down the duct. Indigo granules flow from a cæcal fistula within 24 or 48 hours after introduction into the rectum.

The question of stasis in the small intestine and duodenal ulceration is taken up. The author inclines to the view that the organisms causing this ulceration reach their site by direct route of the intestine.

Infections of the gall-bladder and biliary channels are also considered and here again the author inclines to a direct infection from the intestines rather than hæmatogenous, particularly in the acute infections of the gall-bladder. He acknowledges as probable that the bacteria may, after their passage through the liver and discharge in the bile, act as a nidus for gall-stones, but their virulence must be greatly reduced. On the other hand, the direct entrance from the duodenum of bacteria into the bile duct and up the cystic duct to the gall-bladder could easily cause acute septic cholecystitis. When the liver is acutely infected by the blood channel, abscesses may form in the liver, but it is very rare that the gall-bladder is affected at the same time. Acute infections of the gall-bladder generally occur without any evidence of infection in the liver.

Typhoid carriers are usually females and the breeding ground of the bacilli has been shown by Lentz and Forster to be the gall-bladder. Bond says the clearing up of two bacteriologic points would greatly help us in the questions: whether typhoid bacilli in an active and virulent state are present in the vomitus; whether typhoid bacilli from the urine of typhoid patients which have presumably been excreted by the renal epithelium after passage through the blood stream are as virulent as the bacilli which are present in the stools of these people. Bond says that too little emphasis has been placed on the influence of mucus on the growth of micro-organisms and the part played by the mucus in the protection of the epithelial cells. Pure bile injected into the pancreatic duct produces acute pancreatitis; but when this bile is mixed with mucus, pancreatitis does not ensue (Opie). Bond says that probably different kinds of mucus—that is, mucus secreted by different kinds of epithelium—have different effects on organisms. From a comparative anatomical viewpoint he points out the two kinds of salivary secretion: the woodpecker has one viscid to cause the insects to stick to the bird's tongue and the other an ordinary non-viscid saliva to wash those insects down the bird's throat.

The author considers the genito-urinary tract and mentions the frequency with which organisms are carried up from the vagina to the fimbriated extremities of the tubes. Indigo particles are also

carried up in this way in less than forty-eight hours. Cases of epididymitis are more easily explained by the transference along the vas deferens than by the blood stream. Gonococci in the blood would be very apt to set up joint conditions, but the latter are rare compared to the former. Barnard and Lenhartz emphasized the urinary tract as a possible route for bacteria to the pelvis of the kidney. C. Box points out that coli cystitis is more common than B. coli pyelitis in children. Urinary stasis provides a good condition for a reversed current in the tract and so infection by this route. Bond thinks that when bacilli coli reach the pelvis of the kidney by the ascending urinary tract it produces symptoms and effects which differ from those produced by the same organisms when it reaches the kidney by the blood stream. He suggests that these differences depend on the fact that the organism is undergoing adaptation to a mucus and urinary environment in the one case and a blood or lymphatic stream environment in the other. Again, in considering infections of the mammary gland he thinks the bacteria are usually introduced by way of the nipple and ascend the ducts.

M. S. HENDERSON.

Cummins: Leukocytic Inclusions of Döhle. J. Med. Research, 1913, xxvii, 529.

By Surg., Gynec. & Obst.

Diligent scientific work has been carried out in the investigation concerning the etiology of scarlet fever. Examinations of the lymph nodes, pharynx, skin, and blood have been made and from time to time a new etiological factor has been suggested. Streptococci may play some part in the production of the disease. The most recent suggestion has been offered by Döhle, who upon examining the blood smears of thirty cases found within the cytoplasm of the neutrophilic polynuclears multi-form bodies staining somewhat less darkly than the nuclei. These were found in a large percentage of polynuclears in all except two cases, which were examined late in the disease. There has been already some confirmatory work by other authors, namely, Kretschmer, of Strassburg, who examined thirty scarlet fever cases and all showed inclusions. In one he found them a day prior to the eruption, but the largest numbers were found during the first four days of the eruption.

Nicoll and Williams, using the Manson and Giemsa stains, found inclusions in forty-five of fifty-one scarlet fever cases, which had been ill longer than eight days. Kolmer examined 216 cases of scarlet fever and confirmed the work of his predecessors. He also in diphtheria, sepsis, erysipelas, empyema and pneumonia reported positive findings. Franken of Halle examined twelve scarlet fever cases and found nine positive. In numerous other morbid processes and in normal people he failed to find inclusions. He considers that they are of diagnostic value. Some authors report that the examination of the blood of a series of normal children

shows in many of them the presence of the inclusions. When a febrile condition intervened the inclusions materially increased in numbers. They consider that these are not "pathognomic" of disease — certainly not of scarlet fever.

The author records his personal observations, which were briefly as follows: In 155 examinations of 95 febrile and 26 afebrile cases, 17 normal individuals and 16 laboratory animals, which were suffering from typhoid fever (17 cases), scarlet fever (15 cases), tuberculosis (14 cases), croupous pneumonia (4 cases), mumps (4 cases), local suppuration (4 cases), and various other diseases, in each case 100 neutrophils were examined, except for typhoid fever, in which fifty cells were examined.

The results of his investigation show that the so-called inclusion bodies are to be found in practically all febrile diseases and that they, in some cases, persist in decreasing numbers well into convalescence; in pyogenic conditions (chronic) of afebrile character, in severe injuries without febrile disturbance, and in some normal individuals. They are apparently absent in laboratory animals. A nuclear origin seems probable. The alleged specificity to scarlet fever has not been corroborated.

GEORGE E. BEILBY.

Cabot: The Lymphocytosis of Infection. *Am. J. M. Sc.*, 1913, cxlv, 335. By Surg., Gynec. & Obst.

The majority of infectious diseases are accompanied during their acute stages by a polynuclear leukocytosis but occasionally infections show a lymphocytosis instead, the most striking instance of it being shown in whooping cough, when it is of such constant occurrence that some believe it to be of diagnostic importance. The group of cases here reported are such as would ordinarily be associated with a polynuclear leukocytosis and appear to be connected, at least in some cases, with streptococcal infection and their practical interest to clinicians arises from the fact that they are liable to be confused with lymphatic leukemia.

Case 1. Wound infection at autopsy, with lymphangitis and adenites; lymphocytosis; contained fever with recovery.

The total number of leukocytes was never above 20,000, mostly of smaller types with no other blood changes. Recovery was slow, but complete.

Case 2. Boils: persistent lymphocytosis; recovery. The disease was of about eight weeks duration, the total number of white cells varied from 3,400 to 15,000, the differential counts showing polynuclears from 14 per cent to 21 per cent while the lymphocytes were from 79 per cent to 86 per cent.

Case 3. Occurred during an epidemic of streptococcal sore throat, the patient, a girl of 20 years, in the course of the disease developed a marked lymphadenitis of the neck, groins, axillæ, and submental region; later she developed a cough with slightly blood-streaked sputum; lost weight; developed a good deal of digestive disturbance with

sweats. Physical examination of the chest showed an abnormally dull percussion note over both apices, especially the right; the glands showed no tendency to break down. The leukocytes, upon the first examination, were 9,000, polynuclears 28 per cent and lymphocytes 71 per cent, eosinophiles 1 per cent; a week later she was much better, the blood showing R. B. C. 5,600,000, W. B. C. 3,600, of which 36 per cent were polynuclears and 62 per cent lymphocytes, eosinophiles 2 per cent.

Case 4 was a man who while in a barber's chair had a severe attack of vertigo of short duration. The patient had had a cold a short while before; a week later he developed swollen, painful glands in the neck and was for the next ten days confined to his bed with fever and night sweats. Frequent blood examinations showed a leukocytosis of from 12,500 to 30,500 polynuclears ranging from 50 to 60 per cent, large lymphocytes from 4 to 67 per cent, small lymphocytes from 8 to 41 per cent, with eosinophiles as high as 2 per cent. In this case the differential diagnosis lay between streptococcal adenites, tubercular adenites and lymphatic leukemia. In the majority of cases of lymphatic leukemia the leukocytes run over 90 per cent and show broken-down forms.

SUMMARY

1. Wound sepsis, boils, and widespread streptococcus adenites of tonsillar origin may be accompanied by a lymphocytosis so pronounced as to suggest lymphatic leukemia.

2. No reason is known for this substitution of lymphocytosis for the usual polynuclear leukocytosis of infection.

3. The distinction between such a lymphocytosis (accompanying adenites) and leukemia, depends upon the recognition of an infectious origin for the adenites, upon the lesser degree of lymphocytosis in the infectious type, and upon the course of the disease.

H. A. PORTS.

Byford: Anæmia as an Operative Risk. *Tr. Am. Gynec. Soc.*, 1913, May. By Surg., Gynec. & Obst.

The author divides anæmia into two classes, that with compensation and that without compensation.

Anæmia with compensation includes those cases that have acquired the resisting powers of a normal individual. The hæmoglobin percentage may be quite low, below fifty, but the erythrocyte count is usually above 4,000,000.

The characteristics are: (1) the anæmia has lasted long enough for an adjustment of the functions to the anæmic state; (2) the patient is able to perform the duties of a moderately active life with comfort; (3) the muscular development is good; (4) there is an absence of marked emaciation; (5) the blood pressure is good and the pulse of normal frequency during resting periods; (6) the anæmia responds slowly to treatment since an anæmic habit has been acquired.

They take anæsthetics well, stand major opera-

tions well unless there is great loss of blood, and recover promptly from states of great depression.

Anæmia without compensation is found in those patients who are unable to endure hard work, have poor muscular development, are under-weight and usually have a low blood pressure and rapid pulse.

Several varieties are mentioned, those with chronic sepsis, those bedridden by functional disorders, those subject to continuous depressing influences or overwork, those of recent occurrence and rapid supervention, those of the early stages of convalescence from serious attacks of disease, and those connected with serious chronic, or progressive, incurable diseases.

In estimating a patient's resisting powers, attention should be given to the number and character of the erythrocytes as well as the hæmoglobin percentage. In a general way it may be said that the compensated cases stand operations better than the blood pictures would indicate, while the uncompensated cases do not stand them as well as it would indicate.

Cullen: Operations on Patients with a Hæmoglobin of 40 Per Cent or Less. *Tr. Am. Gynec. Ass., 1913, May.* By Surg., Gynec. & Obst.

Cullen examined the cases from the Gynecological Department of the Johns Hopkins Hospital from 1889 to 1912 and found about 170 cases in which the hæmoglobin was 40 per cent or below.

Of the patients that recovered, uterine myomata were responsible for this decreased hæmoglobin in forty-two cases, and hyperplasia of the endometrium in twenty-three cases. By hyperplasia of the endometrium he means a mucous membrane that has an intact surface epithelium occasionally with slight polypoid outgrowths, very small glands in places and exceedingly large ones in others. In addition, the stroma of the mucosa is very dense and contains in some instances a large number of nuclear figures. The veins in the stroma of the mucosa are often dilated and frequently contain thrombi. He considers this a definite disease in itself. It usually occurs in women of the child-bearing period but has in a few instances been found in young girls. It is temporarily controlled by curettage. In many instances in the end it is necessary to do supravaginal hysterectomy before relief takes place.

Squamous-celled carcinoma of the cervix was responsible for the low hæmoglobin in eighteen cases, pelvic inflammation in thirteen cases, retained placenta in thirteen cases, tubal pregnancy in thirteen of the successful cases, adenomyoma of the uterus in seven cases, and chorio-epithelioma in two cases.

Among other causes of the low hæmoglobin, he mentions hemorrhoids, general peritoneal carcinosis, adenocarcinoma of the uterus, prolapsed rectum, etc.

In 152 cases where patients recovered there were:

49 cases between 40 and 36% inclusive
30 cases between 35 and 21% inclusive
29 cases between 30 and 26% inclusive
30 cases between 25 and 20% inclusive
14 cases below 20%
152 cases

Cullen gave the results of operations on a large number of cases where the hæmoglobin was below 30%. The operations performed were curettage, vaginal removal of submucous myomata, exploratory laparotomy, removal of one or both appendages, and hysterectomy, vaginal or abdominal. He then gave in detail the histories of patients with such a low hæmoglobin that operation could not be undertaken, patients dying in the hospital. Finally he reported a series of cases with low hæmoglobin where the patients died after operation. His deductions were as follows:

From the foregoing it is clearly evident that as a rule patients with a relatively low hæmoglobin stand pelvic or abdominal operations fairly well. Where carcinoma of the cervix or body of the uterus exists, however, the dangers are materially increased.

In those cases where the bleeding is limited entirely to the menstrual period it is well to defer operation until a few days before the next period, thus raising the percentage of hæmoglobin to the maximum.

Hyperplasia of the endometrium is a definite disease. The bleeding caused by this condition often leads to a low hæmoglobin index which can be temporarily checked by curetting. Sometimes after 2 or 3 curettings in the course of a year the excessive flow ceases. In other cases it is necessary to remove the body of the uterus.

"I cannot impress too strongly upon the members of this society the necessity of their becoming thoroughly familiar with the technique of transfusion. This procedure as simplified by Bernheim can be readily employed by any surgeon and should not require more than 20 minutes to half an hour. Transfusion will certainly in the near future become a routine procedure in cases where operations are required on patients with a very low hæmoglobin. It is hardly necessary to draw attention to the inadvisability of employing any but the mildest cathartics after operation on such patients. I recently heard of a patient who, notwithstanding a hæmoglobin below 20% weathered a severe abdominal operation. A day or two afterward she was given calomel and salts and promptly died. The after-treatment of these cases requires the greatest care, coupled with the avoidance of anything that will in the least measure diminish the patient's strength."

Schenck: Thrombosis and Embolism Following Operation and Childbirth. *Tr. Am. Gynec. Ass., 1913, May.* By Surg., Gynec. & Obst.

The author based this paper on a previous study of forty-eight cases, supplemented by nine personal

cases, four of which followed confinement and five operations.

Thrombosis of the pelvic veins is common and often unrecognized. It affected the veins of the leg 381 times among 96,000 obstetrical cases collected from literature and 566 times after 49,161 operations, giving percentages of 0.04 and 1.15 respectively. There were 96 instances after 3204 myoma operations or 3.0 per cent.

The etiology is difficult to prove. An analysis of many facts seems to show that injury to the endothelial lining of the veins and slowing of the blood stream are important predisposing causes, but there must be some other factor and this Schenck believes to be the hæmagglutines set free by hæmolytic bacteria. His argument is as follows:

Thrombi are formed by the agglutination of platelets and red blood corpuscles. The most frequent cause of agglutination is the action of hæmolytic bacteria. This action bears no relationship to the virulence as regards sepsis. Such bacteria may frequently be present causing no other symptoms of their presence. Hence we have the picture of an "aseptic" thrombosis.

There are no reliable premonitory symptoms. Especial stress is laid upon the meaning of slight or severe chest pains during the convalescence.

Prophylaxis begins before, is kept in mind during, and receives particular attention after, operation. The author advocates systematic exercises while the patient is in bed.

Sixty-five per cent of the affected patients never fully recover. If complete restoration is to follow, it will come in the first year.

The status of the Trendelenburg operation for extraction of an embolus from the pulmonary artery is reviewed.

BLOOD AND LYMPH VESSELS

Vaughan: Two Cases of Aneurism Treated by the Mata Method. *Tr. Am. Neurol. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Vaughan agrees with the statement that Mata's method of treating aneurisms works the greatest improvement in the treatment of such conditions since the days of John Hunter. He reports two cases:

Case 1. It became necessary to change a contemplated reconstructive aneurismorrhaphy into one of the obliterative kind combined with an Anel ligation on account of the impossibility of controlling the hæmorrhage in the sac. The patient was a former soldier, white, twenty-nine years old, and insane. The aneurism was operated on about one month after its discovery. At that time a swelling three inches long and one and one half inches in width was noticed in the left groin, with brisk and expansile pulsation. The vessels were exposed by an incision extending along the femoral artery upward across Poupart's ligament, then outward along the outer side of the inguinal canal and stripping up the peritoneum until the external iliac

was exposed as high as the bifurcation of the common iliac. The aneurism was about two inches long, irregularly fusiform in shape and extended above and below Poupart's ligament. The iliac femoral vein was closely adherent to the inner side. The artery was clasped above and below with rubber padded forceps. This stopped pulsation but on opening the sac, red blood flowed out in a steady stream. Attempts were made to control this flow by pressure beneath and to the inner and outer sides, thinking it might come from a collateral branch, but without success. So the walls of the sac were sutured together and then turned in by a second row of catgut sutures, and the external iliac artery was ligated about 1½ inches above. No pulsation in the arteries of the foot at the end of the operation and none was felt until fifteen days later. Good recovery. Death three months later from heart disease. The autopsy showed the sac filled with tough clot, also the external live artery up to the origin of the internal iliac. A second aneurism was found on the superior mesenteric artery, succulated, about 1½ inches in diameter, and filled with clot.

Case 2. Popliteal aneurism of right side. Reconstructive operation. The patient was a negro, male, 40 years old, and had suffered with pain in the right knee for about one year. An oval, pulsating swelling about the size of a hen's egg was seen in the popliteal space. On opening the vessels by incision, an irregular oblong sac was found and at its lower end separated by a constriction. A second sac was seen about half the size of the first but longer and gradually diminishing in size to the normal caliber of the artery. The artery was controlled by means of rubber bands around it, clamped by hæmostats, the sacs were incised, the clots turned out and the walls sutured with fine catgut, turning in successive layers of the sacs until they were obliterated and the lumen of the artery restored to about its normal diameter. At the close of the operation feeble pulsation could be felt in the artery below. Next day pulsation could be felt in the arteries of the foot. Good recovery—well one year later.

Regnault and Bourrut-Lacouture: Occupational Aneurism of the Superficial Palmer Arch (Anéurisme professionnel de l'arcade palmaire superficielle). *Rev. de chir.*, 1913, xlvii, 357.

By Journal de Chirurgie.

The rarity of aneurisms of the palm of the hand, especially of those caused by repeated contusions, is the cause of the author's reporting a case of aneurism of the superficial palmer arch in a man 37 years old who was an assistant gunner's mate.

During the maneuvers in 1910, the patient was several times obliged to strike the breech of the gun forcibly with the palm of his hand in order to open it. He felt a severe pain near the inner border of the hand. In three weeks a small tumor developed which in nine or ten months grew to the size of a hazel nut. This tumor, which is partly reducible, is pulsating.

Operation: local cocaine anæsthesia; dissection of the aneurism; double ligation of the arch and ligation and section of the first digital artery; removal of the aneurism and cure.

Extirpation, which has been performed successfully seven times, seems to be the only correct surgical treatment.

That this was caused by a contusion, as is rarely the case, seems indisputable. So this must be considered as an etiological factor in such aneurisms even though there is the history of a previous wound, as is frequently the case. J. OKINCZYC.

Freeman: Arterio-Venous Anastomosis for Threatened Gangrene of the Foot. *Tr. Am. Surg. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Following the report of a case in which an unsuccessful attempt was made to check the progress of incipient presenile gangrene of the foot by reversal of the circulation, attention was called to the large proportion of failures in these operations, due, perhaps, more to inherent deficiencies in the operation itself than to faulty technique.

A good and permanent result must depend upon the passage of a sufficient quantity of arterial blood through the utmost ramifications of the femoral vein into the capillaries. A certain amount of blood may succeed in doing this (2% to 4%, according to Rothmann), but it is more than probable that by far the greater portion promptly returns toward the trunk through the numerous anastomotic veins, without reaching the capillaries.

The temporary improvements which have been observed following arterio-venous anastomosis, such as the return of color and warmth to the affected part, the inhibition of the gangrenous process, and the disappearance of pain and numbness, may be due merely to the passive hyperemia produced by ligation of the femoral vein, as suggested by Oppel and by Moskowicz, and not to the reversal of the circulation.

From theoretical considerations and from the results so far obtained in arterio-venous anastomosis for threatened gangrene of the extremities, the following conclusions may perhaps be drawn:

1. Although the procedure is justifiable in a few well-selected cases, it seldom has been followed by success, and even then its real value may be questioned owing to the fact that spontaneous recoveries occasionally occur—with as much frequency, perhaps, as do operative successes.

2. Owing to the uncertainty of the value of the operation, one should at least endeavor to do as little harm as possible. Hence, from this point of view, it is better to do a side-to-side anastomosis, or to implant the distal end of the vein into the side of the artery, rather than to unite the two vessels end-to-end; thus preserving to the limb its remaining arterial circulation, however little that may be.

3. According to our present knowledge, operations upon the upper extremities should be con-

sidered with reservation, owing to the comparative frequency of spontaneous recoveries.

Shattock: Occlusion of the Inferior Vena Cava, as a Result of Internal Trauma. *Proc. Roy. Soc. Med.*, 1913, vi, 126. By Surg., Gynec. & Obst.

The author describes the case of a doctor who, when he was 24 years of age, ran several races, in the last of which he held his breath for the entire race of 120 yards in sixteen seconds. Immediately after the race was over, he lay on the grass and within a few moments complained of pain in the lumbar-spinal region. He was put to bed where he remained for six months. Edema of the legs and to a lesser degree of the abdomen and scrotum, supervened at once and persisted for the period mentioned. While in bed the superficial veins began within a few days to dilate, and their enlargement slowly progressed. During the rest of his life the distended veins were supported by the systematic use of carefully adjusted elastic pants, reaching as high as the thorax. Albuminuria appeared directly after the event and persisted through life. Death occurred twenty-five years later. During the last six years of his life he was troubled a great deal with attacks of phlebitis and thrombosis in the enlarged saphenous veins, these attacks being easily brought on. September 25, 1909, the patient noticed some tenderness and discoloration behind the right internal malleolus; this extended to the dorsum of the foot. On the 29th, the temperature was 100° F., and he had a slight rigor. The next day his throat was sore and this gradually grew worse. He died on October 5 from acute tonsillitis and septicemia. Autopsy was performed six hours after death.

The following is a description of the autopsy findings of the vena cava: The preparation consists of the superior and inferior venæ cavæ wanting their cardiac terminations. The right azygos vein, the end of which was shown entering the superior vena cava, was considerably dilated. Except for its highest part, the whole portion of the inferior cava preserved was converted into a flat, impervious ribbon, which was most contracted and thinnest for a distance of 6.5 cm. opposite to and below the renal veins. Portion had been cut away from the front of the vessel below the veins last named to show that its lumen was completely occluded. The common iliac veins and the parts of the external and internal preserved were likewise flattened and obliterated, though somewhat less reduced in size owing to the presence of internal adherent coagulum. The tributaries and trunk of the left renal vein were pervious, although, as tested with the probe, the entrance of the latter into the cava was closed; the same was true of the trunk of the right renal. The right spermatic vein, as far as its entrance to the cava, was likewise pervious. From the left side of the lower part of the cava there projected the occluded end of one of the lumbar veins of the same side. The upper divided end of the inferior vena cava was pervious, though reduced in size.

It was found during the dissection that the hepatic veins were unoccluded. The return of blood from the kidneys must have taken place through the veins of the capsule and thence by way of the lumbar through the azygos vessels.

The author believes that the occlusion in this case was due to the holding of the breath throughout the race. A localized rupture of the intima or the intima and the media took place, which was followed by forcible extravasation of blood into the walls of the vein while the exertion was still in progress; that the lesion, in short, in the initial stage, was the counterpart of a dissecting aneurism of the aorta. With the removal of the abnormal pressure, further extravasation into the vein wall ceased, the blood coagulated and the lumen was closed later by organization of the blood clot. The paper concludes with a full discussion on action of forced expiration and inspiration on the thoracic contents.

EDWARD L. CORNELL.

POISONS

Crowe: A New Method for the Differentiation of Certain of the Streptococci. *Proc. Roy. Soc. Med.*, 1913, vi, 117. By Surg., Gynec. & Obst.

The author uses Dorset's medium which is modified by carrying the process through in a sterile fashion and adding neutral red as an indicator (.005%). The exact method of preparing the medium is given. When colonies are grown on this medium attention is paid to the color of the colony, its shape and the effect, if any, it produces on the surrounding media. The shape of the colony is most important. The consistency of the medium, unless just right, will cause changes which prevent the appearance of characteristic colonies. The author describes the various shapes as "cottage loaf," "broad brimmed hat," "draughtsman" and "flat" types. The shape of the colonies is quite consistent but the color produced varies some with the age of the culture. Recently isolated germs give the best results. The value of the medium as a means of differentiation is diminished by the fact that some streptococci do not grow at all. Yet importance attaches to this negative property for the non-growers are chiefly confined to streptococci isolated from sputum.

The author places the commoner streptococci in two groups. A, the lung streptococci; B, the remaining streptococci. Group A is further subdivided into those which grow on this medium and those which do not. In the former class he places the pneumococcus, *S. mucosus*, *S. epidemicus* and the *S. mucosus* II.; in the latter class are found various other streptococci, among them being the *S. mitis*, *S. mitior*, *S. longus* and *S. brevis*. In group B, the division is made on the color produced primarily, and secondarily by the difference in shape. Those producing a yellow color are the *S. equinus* and several others which are not well known. Those producing the crimson color are the *S. salvaricus*,

S. faecalis and the *S. pyogenes*. The characteristic growths of each of these organisms are fully described and well illustrated by means of a color plate.

The author believes that the Andrewes-Gordon classification provides a good working basis, inasmuch as the streptococci thus divided present characteristic colonies, but by the use of the neutral red medium further definite subdivisions can be introduced. For instance, the *salvaricus* group should be divided into three further subdivisions, the pneumococcus into perhaps three as well. By his classification he has been able to distinguish the chief varieties which cause arthritis in the human being.

EDWARD L. CORNELL.

SURGICAL THERAPEUTICS

Kümmel: Results of Operative and Non-Operative Treatment of Abdominal Tuberculosis (Endresultate der operativen und nichtoperativen Behandlung der Bauchfelltuberkulose). *Zentralbl. f. Chir.*, 1913, xl, 463.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Kümmel reports one hundred and twenty-eight cases of abdominal tuberculosis observed since 1895. Eighty-five were operated upon, fifty-six because of general tubercular peritonitis, with seven deaths soon after operation, (three complicated by ileus). Nineteen died afterwards of progressive tuberculosis. Thirty cases were permanently cured after 5-14 years, eight cases having been done within the past seven years. Nine operations were for tuberculosis of the cæcum. Three of the patients died of progressive tuberculosis, six are well after 2-9 years. Five operations for tubercular appendix gave two recoveries and three late deaths. Nine operations were performed for tuberculosis of the adnexa, with one death and eight recoveries. Of three patients operated upon for tuberculosis of the mesenteric glands, two recovered and one died.

Thus, after operations for removal of abdominal organs affected with tuberculosis, the author got 53 per cent of permanent recoveries, which is of course, a much more favorable result than that shown in general tubercular peritonitis. For the past three years he has treated the latter condition with Röntgen rays, sometimes alone and sometimes in conjunction with operation. Of eighteen patients so treated, four, who were in an extremely advanced stage of the disease, died. All the others were favorably influenced. The rays were applied in the same way as for the treatment of myomata, different fields being exposed on alternate days to two-thirds of the dose necessary to produce erythema. A thick aluminium filter was used. It remains to be seen whether Falk's plan of exposing the open abdomen to intense X-ray action during the operation should be followed. As a general rule, Kümmel recommends operation followed by X-ray treatment in exudative tuberculosis and X-ray treatment alone in dry tubercular peritonitis.

ADLER.

Touche: Colloidal Celium in the Treatment of Cancer (Du selenium colloidal électrique dans le traitement du cancer). *Bull. et. mem. Soc. med. de. Hôp. de. Par.*, 1913, xxix, 451.

By Journal de Chirurgie.

The author has performed some clinical experiments with electrocelium. He gave injections of 5 ccm. at regular intervals about one week apart. Sometimes there was a slight local and general reaction such as is spoken of by all authors but there were no harmful symptoms to counterbalance the numerous advantages coming from it. Touche tried this therapy on three cancers of the face, two of the tongue, one of the tonsil, one of the thorax, two of the breast, eight cancers of the stomach, one of the intestine, three of the rectum, two of the peritoneum, and four cancers of the uterus. These twenty-seven cases are reported in detail in his communication.

He has observed that electrocelium causes epidermization in epitheliomas of the face; that it clears up ulcerating cancers of the tongue and facilitates deglutition; that it lessens pain in osteosarcomata; that in cancer of the breast it facilitates intervention and limits the spread; that it modifies dyspeptic troubles and decreases intestinal obstruction in cancers of the intestine and peritoneum; that it is a great help in cancers of the rectum by drying up the discharges and avoiding involvement of the anus; in cancer of the uterus it is useful in that it causes the patient to think that she is getting better.

In concluding, Touche said, "We believe that celium will remain as a good palliative treatment for cancer."

J. DUMONT.

Loeb and Fleisher: Intravenous Injections of Various Substances in Animal Cancer. *Tr. Am. Ass. Path. & Bacteriol.*, 1913, May.

By Surg., Gynec. & Obst.

Colloidal copper and colloidal platinum acted in a similar manner: both inhibited the growth of tumors during the time of injection. Colloidal sulphur, if active at all, is certainly not more active than either colloidal copper or platinum. On the other hand, easily ionized salts of copper and of lanthanum are without effect on cancer. Combinations of copper with proteid substances are active.

The authors also tested one organic substance which, according to Morgenroth, is very active in preventing pneumococcus infection, namely, ethylhydrocuprein. They found it without effect on cancer. Of the more complex organic substances they tested the following: various preparations of casein and of nucleoprotein; furthermore, serum globulin, horse-serum, egg-albumin, Witte's peptone, protamin, gelatin, lecithin and starch. Of these various substances only the first two named, casein and nucleoprotein, were effective, while all other substances were entirely inactive. One single intravenous injection of either of these two substances destroyed, in a large number of cases, a great part of a tumor; while repeated intravenous injections prevented the growth of the tumor during

the period of injection. After cessation of the injections, the growth started again in the majority of cases, either immediately or after a period of latency.

The fact that another entirely different substance, namely, leech extract, also exerted a marked action on tumor growth similar to nucleoprotein and casein, but acting apparently somewhat more strongly than these latter two substances, seemed to them of great interest. They observed in a number of cases, after intravenous injection of leech extract, even a retrogression of the tumors, while one single injection caused a liquefaction and necrosis of a great part of the tumor. Also combinations of nucleoprotein and leech extract were effective.

It seems, therefore, that of the various proteins, carbohydrates, and lipoids which they have tested so far, only the complex phosphorus-containing proteins are active. Of other substances they found leech extract active and among inorganic substances only colloidal metals.

Very young tumors, from two to six days old, do not seem to be as easily influenced as are those from nine to fourteen days old. Only intravenous injection was effective.

Loeb and Fleisher investigated the action of some of these substances on experimentally produced placentomas in the guinea pig and rabbit. They found usually, after one injection of casein, some hæmorrhages and subsequent necrosis; colloidal copper seemed so far to be without any marked effect on placentomas. With Leighton they examined the effect of casein and of colloidal copper on wound-healing in white mice. The intravenous injection of these substances had no marked effect on the process of wound-healing.

In order to further study the action of the substances they injected a series of normal guinea pigs intravenously with the various solutions which they had tested in the case of tumors, and found that one single injection of nucleoprotein, and possibly casein, protamin and egg-albumin, caused frequently multiple necroses of the liver. The necrotic areas were usually situated midway between the portal and central part of the acinus. Other substances, like gelatin and starch, have not so far caused necroses of the liver in their experience. They have not been able to observe these necroses in the liver of the mouse, even after repeated injections of those substances.

The authors think it most probable that the various substances which were found active in cancer of the mouse change the capillaries primarily, increasing their permeability to the various constituents of the blood.

They reported previously that the intravenous injections of colloidal copper exerted a definite action on a number of human cancers provided they had not been growing too rapidly. These injections of colloidal copper, as was also stated before, can, even in the most favorable cases, at present only lead to a partial retrogression of carcinoma in man.

It is noteworthy that while some cases are affected favorably, other apparently similar cases are not, or are very little, influenced by these injections. In further experiments carried out in conjunction with Lyon, McClurg and Sweek, the authors found that also intravenous injections of solutions of casein may exert a certain inhibiting action on the growth of some carcinomas in man; it is, however, less effective than colloidal copper. In one case of sarcoma of the humerus which they treated, injections of colloidal copper followed by injections of casein produced a decided retrogression and partial calcification of the tumor.

Although so far the authors have not noticed that the casein has any injurious effect in patients, their observations regarding the possible production of necrosis of the liver in the guinea pig after intravenous injection of various proteins seem to them to make the use of such proteins in the case of human beings inadvisable at present.

Kausch: On Collargol (Über Collargol). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In general septic conditions with remittent fever, Kausch found collargol of Credé to be of distinct value. The author shows a large number of such temperature curves, in which the onset was marked by high fever which later rapidly returned to normal. The regularity of such phenomena speaks against the coincidence of spontaneous fall in temperature and the injection of collargol. More corroborative still are those cases which required repeated injections, because the effect at first was only temporary (five such temperature curves are shown). Little or no result was obtained by Kausch in cases of sepsis with continued high fever (two such curves demonstrated). Only in cases with small pus foci does collargol seem of service — not in the presence of large pus accumulations. Cases are particularly suitable in which the temperature remains high after the opening up of pus focus. (Three such curves shown: Abscess of the neck from diphtheria bacilli, septic conditions of the ear, and empyema.) Kausch as yet has not used collargol as a prophylactic measure, but intends so doing.

He uses the Credé preparation. Intravenous injection is the only rational method; per rectum, collargol may be given only when it is impossible or not permitted to inject into the vein. Up to 20 cc. may be given directly into the vein without surgically exposing it. Average dose 10 cc. of 2 per cent solution; in severe cases it may be given daily or 20-

30 cc. every other day. The injection must be made very slowly and is then wholly without danger.

Kausch has treated also eleven cases of inoperable cancer with large doses of collargol, up to 100 cc.; some of these cases have received also X-ray treatment. No case was cured, however. The patients did not permit energetic carrying out of the treatment. One case of carcinoma of the liver, metastatic from cancer of the stomach, showed transitory improvement. One case died three days after injection of 80 cc. and the kidneys were found to be plugged with silver at autopsy. Kausch proposes further to carry on work with collargol and other heavy metals in treatment of carcinoma.

ELECTROLOGY

Freund and Kaminer: The Chemical Action of the Röntgen Rays and of Radium on Carcinoma (Über chemische Wirkungen von Röntgen und Radiumbestrahlung in bezug auf Carcinom). *Wien. klin. Wchschr.*, 1913, xxvi, 201.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The authors applied toxic doses of X-ray and of radium to portions of skin in order to determine the effect the rays would have on the ether-soluble fatty acid found in normal tissues and serum. This fatty acid has a prophylactic action on carcinomatous tissue. The results of the experiments follow: toxic doses of X-ray caused the fatty acid normally present to disappear, whereas radium liberated an ether-soluble fatty acid from the pathologic nucleoglobulin of the carcinoma when the latter was exposed. Cancer cells lose their power of making use of carbohydrates when the tissue is exposed to radium emanation.

Exposing of skin to the X-rays caused the ether-soluble fatty acid to disappear, but exposing the same piece of skin to radium again liberated the fatty acid normally present. The authors believe that the X-rays couple the acid to some substance insoluble in ether whereas radium restores the solubility of the acid by breaking the chemical bonds that unite it with the insoluble substance. These facts may have practical application in cases of X-ray burns, etc., where a radium treatment may restore the ether-soluble fatty acid that has the power of destroying carcinoma cells. Over-exposure with the X-ray lowers the local resistance and makes carcinoma possible. Radium has this therapeutic value, that it robs the injurious substance in carcinomatous tissue of its pathological properties.

LOHFELDT.

GYNECOLOGY

UTERUS

Gellhorn: The Extended Vaginal Operation for Cancer of the Cervix Uteri. *Surg., Gynec. & Obst.*, 1913, xvi, 284. By Surg., Gynec. & Obst.

In cancer of the cervix uteri only "extended" operations give promise of an improvement in final results. A general outline of the technique of the extended vaginal method, as first devised by Schuchardt and later perfected by Schauta, is given. While in America the radical abdominal method is slowly gaining ground, the radical vaginal operation is practically unknown. Yet even the most enthusiastic advocates of the abdominal route admit that the high primary mortality of the abdominal operation contraindicates its use in fat women, in those beyond the age of 60, and in persons greatly reduced in strength by cachexia, sepsis, or heart disease. In such cases the extended vaginal operation is preferable, with its primary mortality of about 5 per cent as compared with the mortality of the abdominal method, which is still in the neighborhood of 15 per cent. The relative percentage of cures, i. e. the proportion between the number of operated cases and those who remained free from recurrence for five years, is substantially the same with both methods; it remains somewhere near 40 per cent.

The systematic removal of the pelvic lymph glands, which at first was considered of fundamental value as to the final outcome, no longer forms an integral part of the abdominal operation. Any previous antagonism between the two methods on this point is thereby eliminated. The operability by the abdominal route is on an average from 10 to 15 per cent higher, which is due in part to complications such as pregnancy, fibroid, hernia, and ovarian and tubal tumors, which in themselves would call for abdominal intervention. This increased operability explains the difference in the absolute percentage of cures which, with the abdominal method, ranges between 16 and 27.5 per cent; while with the vaginal method from 16.4 to 19.3 per cent of all cases admitted were found cured after five years.

As to the choice of methods, the author concludes that in fat persons, in old women, and in those suffering from cachexia, sepsis, or heart disease the vaginal method is preferable. In very early stages of cancer both methods should be considered on equal terms. In moderately advanced cases the abdominal operation is the method of choice. In far advanced cases no radical operation should be attempted, for the high mortality and morbidity and the large number of recurrences are out of all proportion to the chances for a cure. These cases do far better under palliative treatment. The chief

principle of such palliative treatment must be to eliminate sepsis from the ulcerating cancer. The cancer itself grows more slowly and causes comparatively slight symptoms if the mixed infection with streptococci and staphylococci is removed. After all, the solution of the cancer problem will not be found by operative means but along biochemical lines.

Cullen: The Radical Operation for Cancer of the Uterus. *Surg., Gynec. & Obst.*, 1913, xvii, 265. By Surg., Gynec. & Obst.

Cullen sent out letters to surgeons of the South to learn what their experience had been with the radical operation for cancer of the cervix. Very few had had much experience with the operation and even those who had, rarely kept records of the subsequent history.

The author expressed himself strongly in favor of the radical operation and urged the surgeon to "take stock" of his post-operative cases at regular intervals so that the final results of the radical operation in America might be available.

He then gave his own results in 49 cases:

Immediate deaths.....	11 cases
Not located.....	3 cases
Patients living.....	14 cases
Remote deaths.....	21 cases at
	periods varying from a few months to nearly 6 years.

Twenty-six of this number were operated on over five years ago with the following results:

Immediate death.....	7 cases
Not located.....	1 case
Living.....	7 or 26.9%

Of the patients now living,

1 is well	6½ years after operation.
1 is well	8 years after operation.
1 is well	8 years and 4 months after operation.
1 is well	8 years and 6 months after operation.
1 is well	9 years and 8 months after operation.
1 is well	9 years and 10 months after operation.
1 is well	13 years after operation.

In conclusion Cullen drew attention to the fact that campaigns having for their aim the education of the family physician as to the early diagnosis of cancer of the cervix and body had yielded little simply because the patients did not come to the physician early. He strongly emphasized the fact that it was absolutely necessary to tell the women of the country that cancer in the early stages was strictly a local process and not a blood disease and that when taken early could often be totally removed. He said that this information could only be successfully disseminated by the press and

advocated publishing simple and direct articles in the daily press and the weekly or monthly magazines.

Clark: The Radical Abdominal Operation for Cancer of the Uterus. *Surg., Gynec. & Obst.*, 1913, xvi, 255. By Surg., Gynec. & Obst.

Clark reports 36 cases of cancer of the cervix which have been subjected to the radical operation in the University Hospital. This group of cases has been particularly selected because of the more extensive case histories and the possibility of tracing the final results. Briefly summarized, the results are as follows:

Total number of cases.....	36
Operative deaths (peritonitis).....	3
Died from recurrence in 3 months.....	1
Died from recurrence in 6 months.....	3
Died from recurrence in 10 months.....	1
Died from recurrence in 12 months.....	2
Died from recurrence in 15 months.....	1
Died from recurrence in 18 months.....	3
Died from recurrence in 2 years.....	5
Unable to trace.....	7
Alive and no sign of recurrence —	
One year.....	1
One and one half years.....	2
Three years.....	1
Four years.....	1
Four and one half years.....	2
Six years.....	3
Total.....	— 36

POST-OPERATIVE SEQUELÆ —

Suppuration of abdominal incision.....	5
Cystitis.....	4
Peritonitis (recovery).....	2
Ureteral fistulæ.....	2
Vesical fistulæ.....	5
Phlebitis.....	1
Laceration of rectum (fistula).....	1
Pleurisy.....	1
Rectovaginal fistula.....	1

These accidents largely occurred in the advanced cases in which the bladder or rectum were so closely involved as to render them almost unavoidable. Unfortunately, one frequently cannot determine before the operation has advanced beyond a point where it is impossible to abandon it, the degree of cancerous extension; consequently all operations for cancer of the cervix must unavoidably be attended with greater risks than in any other gynecological disease requiring hysterectomy.

However, in every series of cases thus far reported in which the radical operation has been employed, the surgical mishaps and post-operative sequelæ of greater or lesser extent have been relatively much larger than in the reports of simple hysterectomy cases.

As the matter now stands, the combined statistics favor the further trial and perfection of the radical operation among those who are well prepared to carry it out in a most successful manner. There

can be no middle-of-the-road policy. Either the operation must be extremely radical, with the proportionately higher primary mortality and many distressing sequelæ, and with a larger number of ultimate cures among the survivors, or on the other hand it must be a most simple technique, with a minimum primary mortality, few sequelæ, and a much smaller curative basis. Because of the difficulty of carrying out the technique of the radical operation, Clark does not believe that it may ever become generally available for the larger number of surgeons. Hence he hopes that some means of simplifying the technique and rendering it less dangerous may be devised. From a review of the literature and from his personal experience he offers the following summary concerning the radical operation:

1. The operation, in expert hands, notwithstanding its high primary mortality, has given the greatest percentage of permanent cures of any therapeutic procedure thus far suggested for cancer of the cervix.

2. While the above conclusion is true, the general adoption of the operation, in view of its dangers and difficulties, is not to be advised until the primary mortality can be reduced to a much lower percentage by a simplification or perfection of details.

3. The abandonment of the extensive glandular dissection is justified, because this detail adds to the hazards and does not sufficiently raise the percentage of permanent cures.

4. The cardinal advantage of the operation lies, first and above all, in the excision of an extensive cuff of vagina and the widest possible removal of the parametrial tissue.

5. There is no middle-of-the-road policy in cancer of the cervix. The surgeon would better perform a simple vaginal hysterectomy or a high amputation of the cervix with extensive cauterization than to attempt the radical operation if he is not prepared to effectively execute its details.

6. The earnest endeavor by many specialists, with the improved ultimate cures in a few hands, offers the hope that a further simplification and perfection of details in this operation may yet make it more generally available.

Wiebel: The Extended Abdominal Radical Operation for Cancer of the Uterus. *Surg., Gynec. & Obst.*, 1913, xvi, 251. By Surg., Gynec. & Obst.

The radical operation of Wertheim, according to Wiebel, is characterized by the following two points: It offers the widest excision of the parametrium and the removal of the pelvic glands. In order to remove as much parametrium as possible it is necessary to expose the ureters and to push them far away as a preventive measure.

The technique of the operation is as follows: Scraping and cauterizing of the cancer immediately before operation, without anæsthesia, to save the patient's heart; Trendelenburg position; incision in the median line; wide separation of the bladder

from the uterus and vagina; tying of the inferior pelvic and round ligaments; dividing the two layers of the broad ligament. The ureter is exposed up to the entrance into the parametrium without isolating it. Here the ureter is crossed and covered by the uterine vessels. The index finger is pushed through the parametrium between the ureter and vessels, thereby isolating the latter. By this means the ureter is protected during the ligation of the artery and vein. The whole pelvic portion of the ureter thus becomes so accessible that it is easy to complete its separation. Separation of the rectum from the vagina is the next step.

Wide excision of the parametrium follows, after putting on bent clamps for the prevention of hæmorrhage. Two strong clamps are then applied to the already isolated vagina, so that the cancerous tissue is completely enclosed, thereby preventing its dissemination after the opening of the vagina.

The next step is the removal of the lymph glands. They lie along the common iliac, the external, and the hypogastric iliac, and in the trigonum between both, also downward to the obturator foramen and high up as far as the division of the aorta.

The pelvic wound is always drained by iodoform gauze and the peritoneum is closed carefully. But if there is not enough peritoneal material, or if this is infected, one should refrain from the complete closure of the peritoneum.

The freeing of the ureter in this operation is a very important part. Sometimes it is necessary to literally dig the ureter out of the cancerous tissue. Microscopic examination shows that cancer involves the ureter very seldom and very late, and therefore it seems justifiable to free it, even when buried in cancerous tissue, instead of resecting and later implanting it in the bladder. In a small percentage of cases, about 1.5, it seems advisable to resect the ureter. Uretero-vaginal fistulæ form in a certain percentage of the cases, due to necrosis of the ureteral wall, but the majority of these close spontaneously.

The bladder is frequently involved and attached to the uterus, and resection is sometimes necessary. The rectum is rarely involved, and its resection is very seldom required.

The after results of the operation show that, of the 380 cases which passed the necessary five years following operation before being allowed to figure in the results, 8 died of intercurrent diseases, and 160 remained well and free from recurrence. Thus the percentage of cure in cases operated upon is 43. If the primary deaths are left out, as they should not figure with respect to after results, the percentage of patients cured is 53. J. H. SKILES.

Sampson: Results of the Radical Abdominal Operation for Cancer of the Uterine Cervix; Report of 25 Cases. *Surg., Gynec. & Obst.*, 1913, xvi, 304. By Surg., Gynec. & Obst.

Since the spring of 1905 the writer has operated upon 25 patients by the radical abdominal opera-

tion for cancer of the cervix. Some of the pelvic lymph nodes were removed at 12 of the operations, and these were examined microscopically in all but one instance. Metastases were found in one or more nodes in 7 of the 12 cases.

Five patients died as the result of the operation; 4 of these were advanced cases. In the author's experience, the operation in the favorable cases is attended with a very low primary mortality, the high primary mortality occurring in the border-line and advanced cases.

As to the end results (five-year limit), 8 of the 25 patients were operated upon over five years ago. Two of these died as the result of the operation; 2 died later from recurrence; and 4 are clinically free from cancer at the present time, i. e. 4 out of 8 cases operated upon, and of 6 surviving the operation.

The patients dying from recurrence were both young women, averaging 31 years, who had never had children. The type of growth was inverting, arising from the portio vaginalis, the cases appearing favorable before the operation. Both died from extension of metastasis in accessible iliac lymph nodes. A small recurrence in the field of operation was present in one.

The four apparently free from cancer five years or more after the operation (two nearly seven years), had an average age of 45+ years; three had borne children, the other had not. The type of growth in three was inverting, arising within the cervix; in one, inverting, arising from the portio vaginalis. Three of the four appeared unfavorable before the operation. In only one were the accessible pelvic lymph nodes removed, and cancer was found in one of these.

Neel: Results after the Wertheim Operation for Carcinoma of the Uterus. *Surg., Gynec. & Obst.*, 1913, xvi, 293. By Surg., Gynec. & Obst.

Since 1900 the extensive abdominal operation has been employed in practically all cases of carcinoma of the cervix. The percentage of operability for the last five years has been 54. During the last 12 years the radical abdominal operation has been performed in 136 cases; in 70 cases a period of five years or more has elapsed. Excluding the number lost track of (9 cases), the percentage of permanent cures is 23.3. The primary mortality for the last five years has been 11.7 per cent. Excluding the number of primary deaths, the number dying from other causes, and the number lost track of, the percentage of permanent cures is 35.

The author reaches the following conclusions:

1. The extensive abdominal operation for the removal of all uterine cervical carcinoma is justified where there is any hope of complete removal.
2. An exploratory laparotomy is often necessary to determine whether or not a case is operable.
3. The preliminary catheterization of the ureters is a valuable aid, especially in fat patients, and does not necessarily increase the probability of fistulæ or secondary infection of the urinary tract.

4. Preliminary cauterization and disinfection of the primary growth is advisable in all cases.

5. A horizontal lipectomy in obese patients decreases the depth of the field of operation and shortens the time necessary for its completion.

6. The present operative facilities and technique do not justify an extensive resection of the lymphatic glands, on account of the great increase in the primary mortality following such a procedure.

7. All patients should be kept in the Fowler position for several days unless this is otherwise contraindicated by symptoms of surgical shock.

8. By improvements in the technique of the operation, the primary mortality has been decreased from 28.2 per cent for the first seven years to 11.7 per cent for the last five years.

9. Aside from the discovery of the etiological factor of carcinoma of the cervix of the uterus and its successful elimination, the greatest hope lies in the early recognition of the primary growth.

Pollosson and Violet: The Study of Six Cases of Malignant Chorio-Epithelioma (Étude sur six cas de chorio-épithéliomes malins). *Lyon chir.*, 1913, ix, 233. By *Journal de Chirurgie*.

In connection with six personal cases, the detailed observation of which can be found in their original article, the authors recall the principal points in the history of these tumors. Their origin to-day is no longer discussed. They are characterized by proliferation of the epithelium of the chorionic villi,—Langhans and syncytial cells. The term "deciduoma" therefore should be abandoned and should be replaced by "chorio-epithelioma."

These chorio-epitheliomata always follow pregnancy; either normal (22 per cent according to Briquet's statistics of 217 cases), or abortion (33 per cent), or frequently a hydatiform mole (41 per cent), or even, though rarely, a tubal pregnancy (2 per cent). The personal cases of Pollosson and Violet confirm the frequency of the presence of a mole at the site of origin of chorio-epithelioma (four out of six cases). The development of the malignant tumor is not, however, necessarily the outcome of molar pregnancy nor is it even a very frequent termination, since Senarchus only found three chorio-epitheliomata in forty-nine molar pregnancies.

The tumor lodges on a level with the zone of implantation of the placenta. It is sometimes pedunculated (polypoid form), and sometimes intramural (interstitial form). Both types have been observed by Pollosson and Violet. The number and size of these tumors is variable. The constant presence of hæmorrhagic foci gives them a very distinctive truffled appearance. They are soft and very friable.

Propagation is affected solely by the hæmatogenous route; the neoplastic buds have a tendency to rapidly invade the veins. The lymphatics are practically never involved. On the other hand, metastases are frequent and of rapid growth, especially in the lung and secondarily in other viscera

(the liver, kidneys, spleen, brain, etc.). Special mention must be made of vaginal metastases (from retrograde venous emboli), which are not at all rare, and of which the authors report an example.

The most constant and characteristic symptom is hæmorrhage, which is differentiated from the ordinary metrorrhagia following abortion or labor by its abundance and long duration. It leads frequently to a state of profound anæmia, and true cachexia. It can also be accompanied by infection with fever, chills and bloody discharge. The uterus is large and irregular in outline, like a fibromatous uterus. Yet this enlargement is not always great, and certain cases are recognized only by intra-uterine exploration (touch, curettage, and microscopical examination of curettings).

The prognosis is very grave, in spite of the fact that certain cases have been known to recover spontaneously. The only treatment is hysterectomy. Pollosson and Violet have used the abdominal route in all their cases and in one of them they dissected out the ureters from secondary foci surrounding them at the base of the involved broad ligament. The operative mortality is low.

The ultimate results are encouraging according to the observations of the authors, who have four patients in good health after five, four and three years; one patient of Nove-Josserand remains free from recurrence twenty years after operation.

CH. LENORMANT.

Miller: The Relation between Sarcoma of the Uterus and Its Bearings on X-Ray Therapy of Uterine Myomata. *Surg., Gynec. & Obst.*, 1913, xvi, 315. By *Surg., Gynec. & Obst.*

In this paper the author takes up the four following questions:—

1. What percentage of myomata are found to be sarcomatous?
2. What is the primary operative mortality of the radical myoma operation?
3. What is the primary operative mortality in sarcoma cases? What is the percentage cured?
4. What per cent of sarcomata can be diagnosed? That is, if they all come to us in consultation, what per cent should we not treat with X-rays?

Thus the argument here introduced is in reply to opponents of the X-ray therapy who, Miller thinks, have painted very black pictures of the heavy responsibility that the X-ray therapists take upon themselves.

Figures have been taken from the literature presenting reports of continuous series of cases among which the search for sarcoma was made, from which statistics the first question is answered with 2 per cent.

A second table is a compilation representing radical operations such as are usually done in myoma cases, showing the primary mortality of the radical myoma operation to be between 4 and 5 per cent.

A third table, based upon the study of 180 cases

from the literature, is offered in reply to the third question. Where this same radical operation is performed, a certain cure of more than 25 per cent at the worst cannot be assured.

Miller sees little or no progress being made in diagnosis, sarcomatous degeneration being almost impossible in the early stages, and microscopical examination being reserved until the case becomes suspicious. Of the 180 cases from the literature, he has selected those which satisfy the conditions of (1) a radical operation and (2) a microscopic corroboration of the diagnosis or a history of subsequent recurrence or metastasis. Nine of these cases were thrown out because of poor histories and findings. These cases were then presented to Krönig, who answered the question whether or not he would subject each case to X-ray treatment, using the indications which obtain in the Freiburg clinic as given in the monograph of Gauss and Lembcke.

The results of the consideration of these 180 cases are as follows:

1. Of 180 cases, 55, or 30.5 per cent, would receive X-rays; 116, or 64.4 per cent, would not receive X-rays; 9, or 5 per cent, unknown.

(a) Of these 55 cases which would have received X-ray treatment, 7, or 12.7 per cent, under the operative treatment, were reported more than 12 months later as free from recurrence; 24, or 43.6 per cent, died following operation or from recurrence; 24, or 43.6 per cent, were not followed over one year.

(b) Of the 116 cases which would not have received X-ray treatment, 14, or 12 per cent, were reported over 12 months later as cured; 52, or 44.8 per cent, died following operation or recurrence; 50, or 43.2 per cent, unknown.

(c) Of the 9 cases where answer was impossible, 2 were alive over one year, 5 died following operation or recurrence, and 2 were not reported.

2. If we consider the different kinds of sarcoma separately, the following figures are obtained: There were 74 out of 180 reported as interstitial in origin, of which 32 would have received X-rays, 39 would not, and 3 were doubtful.

(a) Of the 32 which would have received X-ray treatment, 3 were free from recurrence after 12 months, 16 died, and 13 were not reported.

(b) Of the 39 which would not have received X-ray treatment, 2 were free from recurrence after 12 months, 18 died, and 19 were not reported.

(c) Of the 3 doubtful cases, 1 lived over a year, 1 died, and 1 was not reported.

3. Only 3 out of 40 sarcomata of the uterine mucosa would have received X-ray treatment; 36 would not, and 1 case was doubtful.

(a) Of the 3 cases which would have received X-ray treatment, 1 lived over a year, 1 died, and 1 was not reported.

(b) Of the 36 cases which would not have received X-ray treatment, 1 lived over a year, 16 died, and 14 were not reported.

4. Of the 66 cases in which the origin of the sarcoma was not designated, 21 would have been rayed, 40 would not, and 5 were doubtful.

(a) Of the 21 cases which would have received X-ray treatment, 4 were free from recurrence over one year, 7 died, and 10 were not reported.

(b) Of the 40 cases which would not have received X-ray treatment, 5 were reported well after one year, 16 died, and 19 were not reported.

(c) Of the 5 doubtful cases, 1 was alive after one year, and 4 died.

Miller admits that, of the 55 cases which he would have treated with X-rays, 7 probably would have died under that treatment, whereas they were reported after one year as cured. He is satisfied, however, at such a small loss when he considers the high mortality and poor end results of the operative treatment. Of the 74 interstitial sarcomata, 32 would have been rayed; that is, a mistake in diagnosis in 43.2 per cent of the cases. Now, allowing such a percentage of error and assuming two sarcomata among 100 myoma cases, the author argues that therefore, in 125 myomata, one, through failure in diagnosis, would be subjected to X-ray treatment, a mortality of 0.8 per cent, corresponding exactly to the experience in the Freiburg clinic. Here, during 18 months, 5 sarcomata appeared among 69 myoma cases. These 5 cases are reported in detail. During the preceding 25 months 47 myoma cases were treated entirely by X-rays and 138 cases have been subsequently so handled. No one of these has thus far shown signs of malignancy.

The author then calls attention to the destructive action of the X-rays on carcinomatous and sarcomatous growths in general, as a result of which he claims the right to use the X-ray treatment conditionally in uncertain cases, later undertaking operation if necessary, without undergoing any great difference in the chances of cure. In closing he says:

"When the public learns that not every tumor of the uterus demands operation, but that there are also efficient conservative methods, we shall certainly be in a position to get hold of more malignant growths in the curable stage."

"In view of the above facts I believe there can be no further doubt that a routine operative treatment of myoma of the uterus, for fear of sarcomatous degeneration, need not be carried out. This ghost should be buried at once." CAREY CULBERTSON.

Fleischmann: Surgical Treatment of Myomata
(Beitrag zur operativen Myombehandlung). *Wien. klin. Wchnschr.*, 1913, xxvi, 445.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author refers to 251 cases of operated myomata with a mortality of 2 per cent; abdominal total extirpation had a mortality of 5.2 per cent, the supravaginal amputation .9 per cent, the abdominal conservative operations 6.2 per cent and the vaginal operation of 0 per cent. The method of choice in the laparotomies was the supravaginal amputation, which was performed 107 times. The special points

in the technique are (1) the cervical stump must be as small as possible; (2) separate ligation of vessels must be preferred to ligature en masse; (3) formation of a good anterior peritoneal flap is necessary; (4) the cervical canal is always left open. Radical extirpation was indicated in cervical myomata, in myomata with necrosis and suspicion of malignancy and in cases complicated with severe infectious processes in the pelvis. Vaginal drainage was rarely employed. The peritoneum must be carefully closed without leaving any cavities over the vaginal edges. Two cases died from embolism of the pulmonary artery, two from acute purulent peritonitis and one from a weak heart two hours after the operation. The low mortality of 2 per cent the writer hopes further to reduce by the X-ray treatment in a correct selection of cases. The objections that the cases of myomata subjected to operation had been selected ones is refuted as he operated on every case needing surgical help, excepting only one case in the 251.

SAMUEL.

Brettauer: Further Report of Cases of Dysmenorrhea Relieved by Nasal Treatment. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

BRETTAUER said after an experience of two and one half years with the nasal treatment of dysmenorrhea, the final results showed that in about one half the number of cases so treated, the results were favorable. In some cases the benefit was temporary, requiring another course of nasal treatment. In other instances the relief was prompt and permanent after three or four caustic applications to the nasal spots during a menstrual interval. In his paper he reported 66 cases so treated.

MAYER stated it had been his privilege to see these cases reported by Brettauer, and also quite a number of others which he had not seen fit to include in his report, because he was not aware of some of the conditions presented. Some of these cases were patients of his own. In following out the treatment of these cases, occasionally a young woman would come to his office with intranasal difficulty, and naturally, being interested in the question of painful menstruation, he elicited from some of them that they had suffered a great deal, and following treatment of the nasal conditions he was able to benefit them, so that his own statistics which he hoped to publish later would be more favorable than those of Brettauer, although it must be said that he put his patients through a very severe test and did not accept his conclusions until he had seen the patients themselves.

As to amenorrhea, he had had several young girls who had not menstruated at all for three or four months, but after applications to the nose, menstruation became established.

DUDLEY asked if he understood the author of the paper to say that this cauterization treatment of the nose should be used in all cases in which there was neither pelvic nor nasal lesions. In other words, if examination of the pelvis and of the nasal pass-

ages was found negative, would he then empirically cauterize?

BYFORD stated that one of the chief objections he had to this method was the indefiniteness in regard to the kind of dysmenorrhea and the condition of the nose. As he understood, there had been no study made of the kind of dysmenorrhea to be helped. There were no lesions of the nose except during the menstrual period, or when congestions occurred during the menstrual period, and they were usually regarded as a result and not as a cause of something; and when women had pain in their breasts every month, the breasts were not treated thinking that would cure any disturbance in the pelvis. There were a good many kinds of dysmenorrhea, one of which had not been described, namely, nervous dysmenorrhea. He was willing to concede that the treatment outlined by Brettauer would help patients who had this form of dysmenorrhea.

MYLES reported that he had found many cases of serious local irritation in the nose, where the central nervous system seemed to be in a state of aggravation or irritation as a result, with phenomena in other parts of the body being created, and when that irritation in the nose was relieved the other symptoms or phenomena disappeared.

BRETTAUER, in closing said, in answer to Dudley's question, that he would by all means touch the nose in the absence of any pathological condition in the nose and the pelvis. He would do so as an experiment, as it could do no harm.

Murphy: Description of Murphy's Method of Abdominal Hysterectomy. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2.

By Surg., Gynec. & Obst.

Having occasion to perform hysterectomy for essential hæmorrhage, Murphy described his method, which originated ten years ago, and which he is convinced has many advantages over the usual methods. By the anterior route there is danger of injury to the ureters, also of secondary hæmorrhage from slipping or loosening of a mass ligature.

The technique of the posterior operation follows: After aseptic preparation and with the patient in the Trendelenburg position, a vertical incision 5 to 8 inches long is made through the inner border of the sheath of the left rectus. The fibers of the muscle are displaced outward with the handle of the knife and the peritoneum divided on the slant between two forceps. The uterus and adnexa are examined to determine the amount of adhesions, etc. The peritoneal cavity is protected by laparotomy pads. Adhesions, if any, between uterus and surrounding structures, are separated. Control of the uterus is secured by a large volsellum forceps or a corkscrew, which is inserted deep into the upper portion of the myomatous uterus. The uterus is drawn out with its posterior surface uppermost. Long, heavy hysterectomy clamps are now applied to the broad ligaments close to the uterus, the blades extending

down to the corporocervical junction, but not including the uterine arteries. There is no danger of injuring the ureters in this step if care be taken to place the ends of the clamps in direct contact with the uterus, above the level of the arteries. If the tubes are diseased, they are removed with the uterus by dividing the mesosalpinx before applying clamps to the ligaments. If healthy, however, their uterine ends may be included in the forceps and both tubes allowed to remain. In patients who have not reached the menopause, the ovaries, or at least one, should always be retained. Even when both ovaries are diseased, it is possible, by resection, to preserve a portion of one or of both. The broad ligaments are divided with the scissors $\frac{1}{4}$ inch to the inner side of the clamps and the uterus, which is now liberated from its lateral attachments, and is rotated down and forward. This brings the posterior surface well into the field.

A transverse incision is made with the scalpel into the posterior wall of the uterus at the corporocervical junction, and the cut edge of the peritoneum secured with artery forceps. This incision is directed forward and slightly down as far as the cervical canal, and then a little up and forward toward the bladder until two thirds of the anterior portion of the cervicocorporal muscularis is divided. The volsellum is then placed on the cervix and firm traction made. The uterine arteries peel away from the muscularis, come into view on each side, and are secured with forceps before they are cut. If not plainly visible no time is spent looking for them. From the level of the canal the incision is continued through the cervical tissue, the operator drawing the uterus forward as he proceeds and rolling it away from the anterior peritoneum and bladder. In this way a peritoneal flap is formed sufficiently large to cover the cervical stump. If the arteries are not clamped before they are divided, the assistant grasps them when they begin to bleed, while the operator continues his incision. Once the uterine artery is exposed on either side no further cutting in a lateral direction should be done, as the ureter always rests just to the outer side of the artery. Each uterine artery is ligated with No. 2 plain catgut, and the hemostats removed. The wedge-shaped gap in the cervix is closed with interrupted catgut sutures, which approximate the cut surfaces but do not include the peritoneum.

The broad ligament stumps may be treated in two ways: (a) By ligation *en masse*, which is exceptional with Murphy. (b) By ligation of the individual vessels. The latter he considers preferable. When the mass ligature is used, it should be tied in the crease produced by the clamp, for the following reasons: (1) The compression of the clamp forces out all the fatty and areolar tissue, leaving nothing but vessels and peritoneum in its grasp. (2) The clamp acts as an angiotribe by injuring the intima of vessels and thereby favoring clot formation. (3) The ridge of tissue between the crease and the cut edge of the ligament prevents the ligature from slipping.

Commencing with the broad ligament stump on one side, a purse-string of catgut is inserted around it and the stump buried beneath the peritoneum. The same suture is used as a continuous Lembert, to approximate the anterior vesico-uterine flap to the posterior edge of peritoneum. When the broad ligament stump on the opposite side is reached, it is buried in the same manner. By this continuous stitch all abraded surfaces are completely buried and nothing is exposed but the line of suture. Blood-clots are removed by dry sponging, and the pads are counted as they are taken out.

The sigmoid is turned down and placed over the line of suture, in order to prevent the omentum from becoming adherent. This is of the greatest importance in all pelvic operations, as the omentum, fixed in this situation, may give rise to much suffering afterward. After drawing the omentum over the small intestine, the abdomen is closed by suturing separately the peritoneum (making the usual ectropion of its cut edges), fascia of the rectus, and skin. Heavy catgut is used for buried sutures, and horsehair for skin. Figure-of-8 silkworm-gut sutures are then inserted through the skin and fascia, to insure against separation of the wound in case the catgut is prematurely absorbed, and to obliterate dead spaces. Under the figure-of-8 stitch is placed a small gauze sponge to act as a buffer, preventing transverse necrosis of the skin.

The advantages of the Murphy method are as follows: 1. The tumor and uterus can be removed about as readily and as rapidly as an ordinary ovarian cyst, the average time for the entire operation being fifteen to thirty minutes. Most of the time is consumed in covering the abraded surfaces with peritoneum. 2. Danger to the ureters is reduced to the minimum by rolling, instead of cutting, the uterus out of the surrounding connective tissue, following the lines of cleavage. 3. There is practically no danger of secondary hæmorrhage, as each vessel is ligated separately. L. J. MITCHELL.

ADNEXAL AND PERIUTERINE CONDITIONS

Gosset and Masson: Neuro-epithelioma of the Ovary (Névraxo-épithéliome de l'ovaire). *Rev. de Gynéc. et de Chir. abdom.*, 1913, xx, 1.

By Journal de Chirurgie.

The authors report a curious case of ovarian teratoma which from the appearance and character of the cells seemed to be formed entirely of nervous tissue. The patient, aged 50 years, was operated on by Gosset, a partial hysterectomy being performed and an ovary, diagnosed as cystic, removed. The patient went into collapse and death from shock followed eight hours after. The tumor, which was the size and shape of a turkey's egg and covered by a hardened tunica albuginea and some cortex, consisted of eight small cysts about which there was a neoplasm consisting of cords of greater or less thickness which were richly anastomosed. The fact that there were no new-formed blood vessels and

that the tumor derived its blood supply only from the vessels pre-existing in the ovarian stroma, prove that this is not a sarcoma. These facts, together with the character and location of the cysts, point to its being an epithelioma. The arrangement of the cells in rosettes and their transformation into fibres was typical. The rosettes were pathognomonic, being exactly like those found in the medullary cord of the embryo both cytologically and histologically. They were identical with certain ependymal cysts frequently found in teratomata in general and especially in the complex dermoid cysts of the ovary.

The authors think their specimen which contains indisputable ependymal cavities is composed largely of young cells which reproduce the conditions found in the embryonal nervous tissue when the neuroblasts and neuroglia cells are beginning to be differentiated. They propose to classify this as an embryonal neuro-epithelioma. The exact origin of this tumor is hard to find. The normal ovary contains sympathetic nerve elements. The nervous elements indispensable for the origin of the tumor were of course atypical and might be the remnants of some embryonal rest or inclusion, the other parts of which have entirely disappeared, due perhaps to the invasion of nervous elements. GEORGES LABEY.

Moritz: On the Nature of the So-Called Ligaments of Mackenrodt. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 135. By Surg., Gynec. & Obst.

Moritz has cut sections at various levels and in different directions of female pelvis, fixed and hardened in formalin soon after death. These he has traced in series and has also examined microscopically some sections of foetal pelvis. In no section did he find a separate area of tissue with definite insertions as described by Mackenrodt, nor is there "a weak small center of areolar tissue between the folds of the broad ligament." It is artificial and wrong to define the lower limit of this as different from the upper. It is obviously an anatomical error and misleading to describe as a separate entity a few bands artificially separated from the remaining parametric tissue.

CAREY CULBERTSON.

EXTERNAL GENITALIA

Spaulding: Vulvo-Vaginitis in Children. *Am. J. Dis. Child.*, 1913, v, 245. By Surg., Gynec. & Obst.

This is a report of the work done in the Children's Hospital in Boston under the direction of Lucas. The purpose of the article is to emphasize the following five things:

1. The prevalence of the gonococcus as an etiologic factor in cases of vaginitis and the unreliability of bacteriological examination in all stages.
2. The total duration of the disease, including the long periods of latency.
3. The importance of the disease on account of the serious complications and sequelæ.

4. The inefficiency of treatment at the best.

5. The consequent importance of prophylaxis, both at home and in the hospital.

Etiology. There is a wide difference of opinion as to the per cent of cases of vulvo-vaginitis in infancy and childhood caused by the gonococcus. The bulk of opinion, however, seems to be that most of the cases are due to this organism.

As to the source of infection it would seem that most cases are infected in the hospital and schools, and that there is a direct carrying of the organism from one child to another by the nurse's hands, by thermometers, toilets, baths, etc. Although many have thought that after a prolonged period of freedom from the disease the recurrence was due to a fresh infection, Spaulding is not convinced of this. Recurrences occurred in her series at 4, 6 and 8 months, and even a year to a year and a half. The average total duration of the disease in 26 cases was 1 year and 8 months. Several children who came to the clinic when it started 2½ years ago were later treated for recurrence.

Complications. The following complications have been observed in 74 cases: proctitis, 6 cases; cystitis, 5 cases; arthritis, 4 cases; pelvic peritonitis, 1 case; inguinal adenitis with suppuration, 1 case; vulvo-vaginal abscess, 1 case; ischio-rectal abscess, 1 case.

Treatment. The directions usually given to the mother in the treatment of these cases are as follows:

A vaginal douche of 2 quarts of saturated solution boric acid three times a day and the installation of argyrol 25 per cent, or another silver salt, 1:1000, into the vagina three times daily. Gonococcic vaccine once a week, beginning with doses of 50 million and increasing 25 million up to 400 million.

The vaccine treatment is believed to be of some value in shortening the course of the disease. Auto-genous vaccine together with gonococcic vaccine has not given favorable results. By way of prophylaxis the author recommends the three most important items of routine which have been carried out in the Babies' Hospital of New York: (1) Vaginal smears are made once a week throughout the hospital period; (2) individual thermometers are maintained as well as individual bottles of petrolatum for a lubricant; (3) the disinfecting of nurse's hands in going from one case to another is carried out.

The arrangement is recommended which is carried out in Chicago at the Juvenile Home, and at the children's venereal ward at Cook County Hospital. The following conclusions are drawn:

1. That all cases of vaginitis with a persistent discharge, which at any time has been profuse, are due primarily to the gonococcus.
2. That the disease may extend over many years, during which time there may be many recurrences and the period of latency may at least be as long as 18 months.
3. That vulvo-vaginitis in children, although it may remain a local disease, is liable to the same complications as seen in adults.

4. That the most efficient treatment does not insure a permanent cure.

5. And, finally, that physicians should realize the importance and prevalence of the disease and institute strict preventive measures, both in hospitals and in private practice.

CLIFFORD G. GRULEE.

Ward: Operation for the Cure of Rectocele and Restoration of the Function of the Pelvic Floor. *Tr. Am. Gynec. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

This operation according to the author is especially applicable to cases of large rectocele. The conditions present in a rectocele were the same as in a cystocele. There was a true hernia or prolapsus of the rectum just as in the bladder. Likewise the bowel had been enlarged and pouched by distention, so that there existed an actual increase in size of the gut similar to the condition at the base of the bladder in cystocele. The same principle was applied in this operation to cure the rectocele as was employed in the modern radical operations for the cure of cystocele: the rectum was completely separated from the entire posterior wall of the vagina and was placed higher up in the pelvis.

The author described the operation and gave the technique used by him in perineorrhaphy.

MISCELLANEOUS

McDonald: The Treatment of Leucorrhœa Due to Gonococcus Infection. *Am. Med.*, 1913, xix, 157.

By Surg., Gynec. & Obst.

The essentials in treatment are free drainage and germicidal applications. Drainage is obtained by the electric thermocautery (fine pointed loop at red heat), 10 or 20 punctures of the cervix are made about one third of an inch in depth in the middle of the menstrual mouth. This method gives free drainage to the cystic collections and it is usually necessary in rare cases to repeat the operation, at most three times. Douches of 1:1000 of the 50 per cent oily solution of chlormetakresol are given and applications of tincture of iodine by swab are made to cervix and by probe to the ducts of the glands. After the puncture wounds are healed an alkaline douche of soda bicarb. (2 oz.) and soda sulphat (2 dr.) to two quarts of hot water is used. Along with the above, general hygienic methods are carried out.

EUGENE CARY.

Polak: The Conduct of Gynecological and Obstetrical Operations in the Presence of Acute Chronic Endocarditis. *Tr. Am. Gynec. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

Polack in summarizing his experience in gynecological operations, concludes: 1. That pelvic

conditions, necessitating operation, may be done after proper cardiac preparation. 2. That the cardiac symptoms, blood pressure, and the functional activity of the liver and kidneys were the only indices of when it was time to operate. 3. That these cases should always be seen and treated in conjunction with a competent internist. 4. The operation should be rapid, bloodless, and done under combined local and general anæsthesia, morphine, novacaine, ether and oxygen. 5. That the Trendelenburg posture should be used only until such time as the field might be properly isolated, when the patient might be gently lowered out of it. 6. That phlebotomy should be done promptly on signs of right heart engorgement. 7. That post-operative distention must be avoided. 8. That morphia was the mainstay in therapeutics.

Krömer: Etiology and Treatment of Pyelitis in the Female (Entstehung und Behandlung der Pyelitis beim Weibe). *Deutsche med. Wchnschr.*, 1913, xxxix, 483.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After giving historical data Krömer enters into the etiology, and agrees with Stöckel that during pregnancy an ascending form of cysto-pyelitis almost always is present. This is contrary to the French investigators, who accept a hæmatogenous etiology. Retention of urine is necessary for the establishment of the first attack of pyelitis. Reasons for this view are: (1) pyelitis frequently arises on the right side, corresponding to the dextroversion of the uterus during pregnancy; (2) ureteral obstruction is followed by urinary retention, then bacteriuria and finally pyuria; (3) relieving the urinary retention by making the ureter passable causes a disappearance of all the signs of the infection; (4) after injury to the ureter or secondary ureteral necrosis, the corresponding kidney sooner or later becomes diseased by an ascending pyelo-nephritis. According to these viewpoints, the treatment must be directed so as to render the ureter passable. This is effected by the patient turning or lying on the opposite side, by ureteral catheterization and by irrigation of the pelvis of the kidney with disinfectants. Based on a series of cases, Krömer recommends the careful irrigation of the pelvis of the kidney. These measures, however, are only of benefit for each attack of pyelitis; permanent results after renal pelvic irrigations are rare. For recurrent cases he highly recommends vaccine treatment. He had three brilliant results amongst five cases thus treated. Finally he discusses the hæmatogenous origin of pyelitis after severe puerperal infections, angina, gastro-enteritis and colitis. Lymphatogenous infections after retroperitoneal phlegmons of the pelvis were also observed.

RUHEMANN.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Engelhard: Psychoses of Pregnancy and the Influence of Pregnancy on Existing Psychic and Neurologic Diseases (Over Generatiepsychosen en den invloed der Gestatieperiode op reeds bestande psychische en neurologische Ziekten). *Nederl. Tijdschr. v. Verlosk. en Gynaec.*, 1913, xxi, 1. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After a detailed description of fifty histories of the disease from the Utrecht clinic and a critical discussion of the literature concerning pregnancy psychoses the author arrives at the following conclusions: The causes for psychoses of pregnancy may be an hereditary taint, an infection or exhaustion. A definite cause can usually not be demonstrated. Severe psychic disturbances are found in eclampsics after recovering from the coma. These at times assume the character of a true psychosis on account of the influence of an infection or the insufficient excretion of the toxins. A connection between the appearance of the psychoses and the retention of urine can usually be proven. Psychoses during labor arise from psychic predispositions, toxins or hypersensitiveness. These psychoses have an important forensic significance, just as painless labor does. Artificial interruption of pregnancy in psychosis is wrong and dangerous. It is negative in its results as a prophylactic measure for the prevention of psychoses. Psychoses complicated with an albuminuria of pregnancy must be considered as a contra-indication for the induction of an abortion. The treatment of pregnancy psychoses must be as conservative as possible. During labor and before complete dilatation interference should be rendered only if symptoms are present which point to a threatening eclampsia.

STRATZ.

Harrison: Myoma and Pregnancy; the Therapeutical Indications. *Va. M. Semi-Month.*, 1913, xvii, 6or. By Surg., Gynec. & Obst.

In this article the author discusses the complications and treatment he believes should be considered in cases of myomata-complicating pregnancy. These tumors cause actual earnest danger only in a few cases and these may be considerably diminished by a cautious clean management of the labor and the puerperium. On the other hand, Bland-Sutton believes that the life of the woman is in jeopardy not only so long as the foetus is in the uterus but during the expulsion also.

Myomata situated in the lower uterine segment, while usually offering an obstacle to the birth of the child, may be drawn upward during labor and leave the pelvis free. Operative intervention is indicated when the tumor is fixed so as to offer an obstruction

to the passage of the child. During the pregnancy, the author advises expectant treatment as a rule; but when something definite must be done, he suggests interruption of the pregnancy or Cæsarian section at term. The former is often very difficult, for the placenta may be firmly adherent; or the foetus may be passed after a long time during which fever and degeneration of the myoma with sepsis may follow. Myomectomy does not offer a perfect solution of the difficulty, for a small myoma left at the time of operation may grow to large size before the termination of the pregnancy. When labor sets in, he says, our attitude must still be an expectant one, but when it is seen that the tumor does not move upwards with the unfolding of the cervix, Cæsarian section should be done at once, for the forcible attempts to drag the child through the pelvic canal past the fibroid may so injure the tumor as to cause it to slough. If the fibroid be single it may be enucleated, or if multiple, or the case be septic and the child dead, total extirpation is the operation of choice. If the case is aseptic, supravaginal amputation is the operation of choice and is less dangerous and easier, but as Bland-Sutton suggests, there is greater danger to the ureter in total extirpation.

As a general rule, if the birth is accomplished without myomectomy the puerperium should be allowed to reach its completion before operation is undertaken. If the location of the tumor is such that it interferes with contraction and retraction of the uterus the hæmorrhage following labor may be so severe as to necessitate irrigating the cavity of the uterus with tincture of iodine or to pack it with gauze. Greater dangers than these are offered by gangrene of the polypi or submucous myomata as they descend into the vagina. The death of the myoma that is known sometimes to occur is easily understood if we remember that it has grown while the blood-supply of the uterus was very good, but during the puerperium when the larger part of this supply is suppressed the fibroid contains more tissue than can be supported on this limited blood-supply.

C. D. HOLMES.

Hauser: Myoma and Pregnancy (Myom und Schwangerschaft). *Klin.-therap. Wchnschr.*, 1913, xx, 317. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Menstruation appears earlier than usual in myomatous patients. However, the writer does not believe that this early appearance is caused by the myomata, as these tumors have hardly ever been found in girls before puberty and myomata grow too rapidly. He concludes that girls who menstruate

early easily acquire myomata. Although in myomata the menopause occurs later than is normal, yet fertility is lessened. Opinions differ as to whether sterility is the consequence of myomata or vice versa. The author had poor results from conservative myomectomies with respect to the possibility of future pregnancies especially if diseased adenexa and multiple myomata coexisted. However, in the interstitial subserous and especially in the pedunculated subserous and intraligamentous myomata, the possibility of future pregnancy is not improbable after conservative treatment. Conservative operations should always be guardedly undertaken, as the results are uncertain and all myomatous tumors are not always removed. What is the influence of myomata on an existing pregnancy? Premature interruption of pregnancy may occur (1) as a result of deficient nutrition of placenta and decidua; (2) on account of an insufficient capability of expansion of the myomatous uterus; (3) by expulsion of detached myomata; (4) in consequence of excessive growth of the myomata, which may interrupt pregnancy by mechanical pressure or by the induction of labor pains. The average frequency of abortions is 8 per cent to 10 per cent, but in myomata it is 15 per cent. How does pregnancy influence myomata? Softening, with increase in the volume of the tumor, may take place with regression after labor, also necrosis in the form of a doughy softening, abscess formation and putrefaction.

Diagnosis of myoma in pregnancy is difficult, as palpation often fails, and the amenorrhea of pregnancy is obscured by hæmorrhages from the myoma and occasionally colostrum appears in myomata without pregnancy. The differential diagnosis between myoma and pregnancy, especially the large soft myoma, offers considerable difficulty. Treatment: the former practice of artificial interruption of pregnancy has been discarded since the development of aseptic surgical methods. Operations should not be considered in the interstitial or subserous myomata with no severe disturbances or danger of obstruction of birth canal during labor. Interstitial and subserous myomata complicated by necrosis and other disturbances must be enucleated. Social position and the former fertility of the patient must be considered. The author reports ten cases, in three of which a conservative procedure was practiced. In one case of pregnancy in the third month a cervical myoma the size of a fist was enucleated on account of symptoms of incarceration. The child was carried to full term. During a laparotomy performed $5\frac{1}{4}$ years later multiple myomata and bilateral adnexal disease were detected. In four cases the size of the myomata and displacement of the uterus required a radical operation. In one case a pregnancy in the fimbriated end of the tube was found. If in multiple myomata difficulty in closing the wound flaps arises a radical operation is preferable. In a similar case Bumm made use of the omentum to close the wound defect.

МОНР.

Viannay: Myomectomy in Case of a Gravid Uterus; Recovery; Continuation of Gestation (Myomectomie sur utérus gravide; guérison; continuation de la grossesse). *Gaz. de gynéc.*, 1913, xxviii, 8. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb..

Hæmorrhage occurred during the fourth month of gestation in the case of a 33-year-old primipara. Examination: fundus above the symphysis; soft, cystic, pulsating tumor in the pouch of Douglas. Diagnosis: extra-uterine pregnancy. The error was discovered during the operation (laparotomy). The posterior mass was the pregnant uterus, which was firmly held in that position by a fibroma which was attached to the uterus by a broad base and pressed against the symphysis pubis. The fibroma was excised without opening into the uterine cavity, and the parts were carefully sutured. Recovery was normal and there was no interruption of the pregnancy.

CZEMPIN.

McDonald: Bladder Troubles in Pregnancy: A Cystoscopic Study Based on 54 Cases. *Am. Med.*, 1913, xix, 180. By Surg., Gynec. & Obst.

The author in this series of cases studied twelve normal bladders in early pregnancy and found in all that as early as the sixth week of pregnancy the trigone became congested. The bladder mucosa became oedematous and thickened, and the lymphatics were increased. This condition was exaggerated when retroversion was present. The oedema is more marked about the neck of the bladder and involves the ureteral orifices so that an obstruction of the flow of urine may result.

The ureteral orifice may in pregnancy be patulous. This condition usually involves the right ureter and is usually associated with a previous inflammatory condition. This is known as the "golf-hole" ureter.

The bladder of pregnancy exhibits a picture of general hypertrophy; thickening of musculature, proliferation of epithelial cells, and increase in lymphatics. Displacement of the bladder to the right is very common.

Inflammation may be marked by generalized oedema and hyperæmia. The inflammation of pregnancy is not usually confined to the trigone, and the pus formation is usually greater in this type of cystitis.

Fever of a low grade is usually associated with a cystitis of pregnancy differing in this way from ordinary cystitis.

Cystitis of pregnancy may perfectly simulate pyelitis and unless cystoscopic examination and ureteral catheterization is performed the diagnosis can not be made.

In a number of cases followed through pregnancy there was apparently no decrease in the amount of congestion throughout.

The treatment differs from that in ordinary cystitis in that if ulcers occur they are not treated till the surrounding condition is cleared up. Medicated solutions such as quinine bisulphate 1:2000, boric

acid, nitrate of silver 1:30000 and mild astringents are indicated. Plenty of rest and large quantities of water are advised. Hexamethylene-tetramine should be used with care and combined with sodium benzoate.

EUGENE CARY.

Webster: The Conduct of Gynecological Operations; also of Pregnancy and Labor in Acute and Chronic Affections of the Heart. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Webster said operations should be avoided in active or recent valvular diseases, dilatation or myocardial degeneration, except in conditions of extreme emergency. General anæsthesia might greatly increase the risk by causing coughing, straining, vomiting, respiratory embarrassment. Slow administration with free admission of air or oxygen was necessary. Local anæsthesia was of importance in such cases. In slight or well compensated affections, regular methods of anæsthesia should be employed.

As regards pregnancy, women with heart disease should not become pregnant. If pregnancy occurs it is on the side of safety to advise early abortion, especially if there has been recent acute disease of any variety, or old mitral disease with failure in compensation.

With reference to labor, if the patient's condition is good, the first stage should be allowed to progress, as in normal cases, all strain and excitement being avoided. It is advisable to avoid straining in the secondary stage by artificial delivery, forceps, or turning under anæsthesia. In the third stage, it is best to separate the placenta manually, allowing some loss of blood. A woman at term with failure in compensation or embarrassed circulation probably has the best chance if delivered by vaginal or abdominal Cæsarean section.

Grimsdale: Case of Ovarian Pregnancy with Full Time Fœtus. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 115. By Surg., Gynec. & Obst.

The patient was a young woman who entered the Royal Infirmary complaining that she had not become small again after her first child was born. Examination revealed the uterus lying on the right side, while a large mass, freely movable, occupied the lower abdomen, reaching to the umbilicus. No tenderness and no free fluid. It was thought to be a solid tumor of the ovary. The tumor was delivered whole by operation, whereupon it was found to occupy the position of the left ovary. The corresponding tube and mesosalpinx were entirely normal, as was the round ligament. The tumor, on being opened, disclosed a fœtus and a placenta. X-ray of the fœtus revealed its bones as developed up to term. The tumor wall enclosing the fœtus was much thinned out, so that sections from it failed to demonstrate ovarian tissue. Nevertheless the author insists that this case is undoubtedly one of ovarian gestation.

CAREY CULBERTSON.

Zinsser: Damages to the Kidney in Eclampsia (Über die Schädigung der Niere bei der Eklampsie) *Berl. klin. Wchnschr.*, 1913, I, 388.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Zinsser discusses the question as to whether a usable prognosis for the course of eclampsia could be formed from the observation of renal activity. Control of diuresis increases in prognostic importance if the specific gravity is observed at the same time. With a diminution of the amount of urine excreted and with a decrease at the same time of the specific gravity the prognosis grows bad. Estimation of albuminuria and the nitrogenous substances does not give any dependable prognostic data (Zangenmeister). The author finds that the determination of sodium chloride excretion in eclampsia which is complicated by oedema may give a somewhat reliable prognosis. If, following labor, the sodium chloride in the urine of an oedematous eclamptic drops suddenly and continuously beneath the fraction of the normal amount (0.1) it essentially renders the prognosis bad, while a continued medium amount of sodium chloride allows of a favorable prognosis and that too in cases which are gravest clinically. The question as to whether the degree of therapeutic behavior of the kidneys can influence the course of eclampsia is also discussed. The opinion is expressed that for the majority of true eclampsias treatment of the kidneys, from the simplest diaphoretic measures up to decapsulation, is of no value.

FROMMER.

Mayer: Treatment of Eclampsia by Intralumbar Injections of Normal Pregnancy Serum (Über die Heilung der Eklampsie durch intralumbarale Injektion von normalen Schwangerenserum). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 297.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reviews an article which had previously appeared in which he reported a severe case of eclampsia cured before termination of labor by the intravenous injection of normal pregnancy serum. He was induced to attempt this treatment in the belief that eclampsia is the manifestation of a severe poisoning of the central nervous system and that in normal serum an antidote is found which acts very quickly when injected into the lumbar sac. The author injected a patient who was in deep coma, the lungs oedematous and the heart threateningly weak. The prognosis was bad from the beginning, and the patient died immediately after the injection. On post-mortem examination extensive destructions were found in the liver. Mayer removed 5 cc. of fluid from the lumbar region in the new-born in whom severe eclamptic attacks appeared after labor and the same amount of blood serum of a healthy pregnant woman replaced the amount removed. A remarkable improvement occurred which startled all those present. The cyanosis, the cramps, the disturbances of respiration and heart disappeared, but in spite of this the child also died. Although neither of these results were en-

couraging the author still believes, in view of the results, obtained that he is on the right track, and compares his results with those which Rissmann made with the lumbar injection of magnesium sulphate.

SIEFART.

Green: The Conservative Treatment of Toxæmia of Pregnancy with Convulsions. *Boston M. & S. J.*, 1913, clxviii, 376. By Surg., Gynec. & Obst.

The author argues the toxæmic woman is ill-prepared to resist the shock and trauma of any surgical procedure, and that in most cases surgical measures should be postponed until by active eliminative measures the toxæmic gravida is better prepared to withstand the added strain of delivery. He believes conservative treatment would save many women who are lost by hurried delivery. He would resort in desperation to emptying of the uterus by forced cervical dilatation or vaginal Cæsarean section if in a reasonable time all medical measures fail.

The author's method of treatment is essentially as follows: First; a high compound enema.

Oil of turpentine, *dr.* 1;

Extract of aloes, *gr.* xx;

White of one egg;

Sulphate of magnesium, *oz.* 2;

Glycerine, *oz.* 2;

Water, *oz.* 2;

Next the patient is given a hot-water immersion bath. One may use a hot pack or dry heat. An ice bag is applied to the head. After the bath, the patient is wrapped in blankets and put to bed. If the patient is comatose, the stomach is washed out and there is left therein 8 ounces of water with 2 ounces of epsom salts, or a like amount of castor oil and two drops of croton oil; if conscious she can swallow the cathartic. Salt solution under the breasts may be used, and except with marked odema, fluids may be given freely. Nitroglycerine in $\frac{1}{100}$ grain doses may relieve blood tension and promote diaphoresis.

The author reports ten successive cases, one of which was a case of twins, in which 5 babies were discharged well, and 6 were stillborn including 3 macerated foetuses; all the mothers recovered.

C. H. DAVIS.

Williams: The Present Position of Abdominal Cæsarean Section in Eclampsia. *Boston M. & S. J.*, 1913, clxviii, 456. By Surg., Gynec. & Obst.

The author has collected 85 cases of eclampsia treated by abdominal Cæsarean section. There were 41 maternal deaths from the following causes: sepsis, 7 deaths; hæmorrhage from the broad ligament after the Porro operation, 1; rectal hæmorrhage, 1; tuberculosis, 1; exhaustion, 1; pneumonia, 1; eclampsia, 20. In 9 cases, the immediate cause of death was not stated. He compares this maternal mortality of 48.2 per cent with the results of various men in the other methods of rapid delivery.

MANUAL OR INSTRUMENTAL DILATATION

Zweifel.....	80 cases	15	% mortality
Glockner.....	143 cases	15.49	% mortality
Ferri.....	82 cases	7	% mortality
Newell.....	79 cases	26.5	% mortality

VAGINAL CÆSAREAN SECTION

Dührssen.....	112 cases	15	% mortality
Beckmann.....	43 cases	18	% mortality
Veit.....	33 cases	3	% mortality
Fry.....	13 cases	6 $\frac{2}{3}$	% mortality

He concludes that abdominal Cæsarean section in eclampsia should be restricted to those cases in which there is a pelvic contraction sufficient in itself to demand it, and possibly also to early cases of threatened eclampsia at or near term, where the shock of a vaginal delivery seems to offer much greater danger than the added strain imposed upon the excretory organs by Cæsarean section. He has considered only cases where an operative delivery is deemed necessary.

C. H. DAVIS.

Scott: Cæsarean Section in Double Uterus and Double Vagina. *Am. J. Obst.*, N. Y., 1913, lxvii, 519. By Surg., Gynec. & Obst.

Scott reports a Cæsarean section on a 32-year-old primipara with a double uterus and vagina, and justo-minor pelvis with a conjugate vera of about 9 cm. There was rupture of the membranes after about 12 hours of pain, after which weak pains were present for three days. After several hours of pain on the fourth day, it was discovered that the cervix of the pregnant side was dilated only to the size of the finger, that pulse and temperature were normal, that the foetus was unendangered, and that the head was high but impacted in the pelvis. After the living child was delivered by section there was shown to be a tear of the septum separating the pregnant from the non-pregnant side. Through this tear the decidua of the non-pregnant side was delivered. Except for a passing acute dilatation of the stomach the woman made a good recovery, and left the hospital with her child.

N. SPROAT HEANEY.

Von Klein: Uterus Bicornis as the Cause of Chronic Transverse Position; Six Versions in One Case, Cæsarean Section in Another Case (Uterus bicornis als Ätiologie chronischer Querlage; Sechs eigene Wendungen in einem, Sectio cæsarea in einem anderen Falle). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 452.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Besides the narrow pelvis, the large roomy uterine cavity and the pendulous abdomen, the author sees in the uterus bicornis a predisposing factor for the transverse position of the foetus. He shares with Von Franqué the same opinion that the cause of this is the longitudinal median fold which reaches from the uterus down into the uterine cavity and compels the child to adopt such a position that the septum finds a place between the head and the knees of the child. Von Klein describes two such cases which were observed by him.

In the first patient, the first labor, which was a premature birth in the seventh month, ran a spontaneous course. Transverse position was present in each of the following seven labors. In six cases the author performed version, and once another physician. All the children are alive. The patient again became pregnant, for the ninth time. In the second case besides the deformity of the uterus a narrow pelvis existed with a conjugata vera of 7.5 to 7.8. Podalic version and extraction was performed by different physicians during the 1st, 2d, 5th, 7th, and 8th labor on account of a transverse position. All the children were still-born or were subjected to craniotomy. In two other labors of the same patient breech presentation existed and these children were also still-born. To conform with the wish of the patient to have a living child, Von Klein performed a Cæsarean section with relative indications at end of the tenth pregnancy as soon as the first labor pains occurred. Transverse position again was present. On account of the distinct bicornicity of the uterus the author did not make a median longitudinal incision but a transverse incision over the fundus of one of the horns, and as the extraction of the child was impossible he also incised the fundus of the other horn, including the septum. The upper end of the septum was 3 cm. thick and its lower border reached 12 cm. down from the surface of the fundus. The incision in the septum was closed by a few interrupted stitches to stop the hæmorrhage. The uterus was closed with two rows of sutures. The patient was discharged as cured on the 14th day. The child lived.

In both cases a uterus bicornis supra-semiseptus existed. The author considers the deformity of the uterus as the cause of the transverse position. In the second case he performed a bilateral salpingectomy to induce sterility. The unfavorable termination of the former labors was due to the narrow pelvis. The prognosis of labor with transverse position and a bicornate uterus is not unfavorable if a physician is called in time. On the other hand, a patient in whom this complication has been diagnosed during a former labor, should immediately call a physician at the commencement of labor as in such cases the transverse position is often repeated.

NEBESKY.

LABOR AND ITS COMPLICATIONS

Cragin: Under what Conditions should Uterine Inertia be Treated by Artificial Delivery? *Tr.*

Am. Gynec. Ass., 1913, May.

By Surg., Gynec. & Obst.

Cragin said uterine inertia was of greater importance in the second stage of labor, especially if the membranes were ruptured and the pressure of the uterus came directly upon the child, than in the first stage, yet in several Cæsarean sections performed during a prolonged first case the presence of meconium in the liquor amnii and the marked slowing of the foetal heart prior to the operation had con-

vinced him of danger to the foetus from uterine inertia even during the first stage of labor.

Uterine inertia associated with foetal heart sounds indicating danger to foetal life was one of the first types of inertia indicating artificial delivery. His plea was for studied, skilled, artificial assistance in the delivery before the mother and child were exposed to these dangers.

There was one condition not usually classed as uterine inertia which the writer called attention to before closing his paper. It was the long delay which sometimes intervened between the rupture of the membranes and the uterine contractions of the first stage of labor. Patients sometimes presented themselves at the hospital with a history that their membranes had ruptured three, four, or even five days before their labor began. An unfortunate experience several years ago in which the foetal heart ceased before the labor was completed, and a study of the temperature charts of a number of these cases, convinced him that in many particulars they resembled cases of uterine inertia during actual labor; that there was foetal danger from interference with foetal circulation from prolonged pressure, and that maternal morbidity was common from sapræmia, if not from bacteriæmia. For these reasons he had made it a rule in recent years, both at the Sloane Hospital and in his private practice, to introduce an elastic bag into the cervix if uterine contractions had not started at the end of twenty-four hours from the time of the rupture of the membranes. The elastic bag as a rule not only brought on uterine contractions, but lessened the further escape of the liquor amnii and the results, both foetal and maternal, had seemed to justify the procedure.

DAVIS stated, in discussion, that from the accumulated experience of the profession it seemed pituitrin came into practical competition with strychnia, opium and ergot, and Edgar had given a very valuable hint as to the danger of pituitrin. All recognize the fact that in many cases opium, to the point of lessening nervous excitability and securing rest, was of the greatest value in bringing about the development of the physiology of labor, and all were aware of the very frequent experience of the unexpected and rapid delivery of multiparæ to whom had been given opium to secure rest, and how frequently the woman surprised herself—and us, most of all, when we were caught napping—but certain it was, opium in the general experience of the profession was the one sedative which was a stimulant to the ganglion which controlled the action of the uterus. As regards strychnia in comparison with pituitrin it seemed to him the difference between the two might be stated in this way: that strychnia given in moderate doses was a physiological stimulus to the ganglion supporting and maintaining uterine action, while pituitrin, and especially as indicated by Edgar, was a matter of more brief and more stormy result, and hence much more uncertain; and personally, he had not felt that he could substitute pituitrin for the use of strychnia as a physiological

stimulant or aid in labor. The use of ergot was a thing to be carried out with great caution, and he still adhered to the belief that ergot should be given upon the emptied uterus only, and in Cæsarean section one might lay aside ergot entirely oftentimes with advantage. As to contracting the dilating bag with the bougie as an inducer and promoter of labor, in connection with strychnia or pituitrin, it was of advantage in that it decidedly stimulated the mucous secretion of the cervix and was less apt to alter the mechanism of labor.

POLAK stated that no discussion of pituitrin in this society should go out without sounding a word or two of warning. He had had within the last three weeks a case of rupture of the uterus from the use of pituitrin. He had also seen within a month a case that was thrown into such violent uterine contraction that anæsthesia and morphia had to be used to control the spasm of the uterus; consequently, from his experience, which was comparatively limited (only 76 cases), he had drawn some conclusions that were only tentative, that pituitrin had little or no place in the first stage of labor; that it was dangerous so far as our experience was concerned unless there was absolute knowledge of the pelvis, particularly in outlet contractions and particularly in borderline contractions.

Furthermore, in order to get the best use from pituitrin we should have a dilated or at least a dilatable cervix, because injuries to the cervix had been just as Edgar had stated. He had found, furthermore, that it had no value, as far as his limited experience had gone, in establishing uterine contraction, in emptying the uterus in cases of incomplete abortion.

Another observation he had made was that where it was used in the third stage labor, he had gotten secondary relaxation in a sufficient number of cases to warn him that when he used it in the third stage it should be combined with ergot.

BYFORD stated there was a mild form of inertia which in primiparæ meant a great deal perhaps in some cases, due to general exhaustion from muscular exercise of the prolonged first stage, or want of rest and exhaustion of the nervous system. He had seen many cases in which there was inertia of the cervix. The patient had an irritable condition of the parts, and would have if the first stage of labor was unusual in its length. At one time, when investigating the function of the membranes in labor with a view to preserving them, he got in the habit of using opium frequently, and in these cases the administration of opium would give rest, particularly as it acted in contrast to the advice so often given to women to get around and try to stimulate labor.

DICKINSON said that between foreign and American obstetrics there was one great distinction. Kerr read a very able paper before this society on waiting or long delay in the second stage of labor. The German practice of delay in the use of the forceps or the infrequent use of the forceps as com-

pared with the American was most striking. He submitted the particular type of American woman, neurotic, easily tired from vigorous muscular exercise and anxiety, was a type to which the pituitary extract particularly applied. It was most fortunate to have had so lucid an exposition of the exact therapy of pituitary extract as Edgar had given.

STUDDIFORD said one of the most important points in these three papers was that of calling attention to the dangers of pituitary extract. Enthusiastic reports sent around by the manufacturers led to the promiscuous use of pituitary extract with many unfavorable results. His own experience has been very much the same as that of Edgar. The pituitary extract was so uncertain in its action in the first stage of labor that it was apt to cause such bad results in the cervix that the cervix, it seemed to him, should either be fully dilated or dilatable, and was many times, but where the diagnosis was positive that there was no obstruction to rapid delivery, delivery could be brought about promptly. Therefore, the question of diagnosis was important in the management of these cases as well as the indication for treatment. An accurate diagnosis should be made before any line of treatment was followed out.

GREEN stated that these radical papers were going out to influence general practitioners, and in the subsequent discussion something ought to be said as to what should be done in the way of prevention of uterine inertia. The average woman who was going to have a baby should be trained to go through the ordeal just as a good athletic trainer would teach men on a football team. She should be trained for the condition, and if this was done in a large proportion of cases the inertia would disappear. Furthermore, there were a great many women who were benefited during the last two months of pregnancy by systematic treatment with iron, arsenic, and strychnia. He gave strychnia in small doses to women in the last two months of pregnancy. If a woman was in pretty good shape physically, was not tired, if she had a fair nervous system, she would go through labor pretty well if she kept moving around.

WEBSTER said that in cases of uterine inertia associated with rigid, elongated, or hypertrophied cervix, he believed that the important measure of treatment was vaginal Cæsarean section, and not abdominal Cæsarean section unless there was contraction of the pelvic outlet.

As regards the use of pituitrin, he had been using it in the Presbyterian Hospital, Chicago, and his experience harmonized with that of Edgar, although the speaker had not used it perhaps in as many cases as had Edgar.

Harrison: Uterine Inertia: Its Treatment. *Tr. Am. Gynec. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

It is important to recognize the distinction between primary and secondary inertia. In primary inertia, before the rupture of the membranes, the

conditions obtaining are comparable to those existing during pregnancy. Active intervention is not indicated. Patience on the part of the physician is essential and his aim should be to inspire the patient with courage and hope. She should not be confined to bed. After the escape of the liquor amnii, active intervention is indicated only if danger exists for the mother or child, and then the metreurynter is preferred. Vaginal hot water douches are liable to cause septic infection from injury to the epithelium. After dilatation the author prefers podalic version followed by extraction. When the head is resting on the perineum the forceps are indicated, especially in multiparæ with diastasis of the recti. The Kristeller-Doederlein method of expression has a limited application. With reference to drugs exciting uterine contraction, ergot should never be exhibited until after the birth of the child and delivery of the placenta. The author has had no experience with pituitary extract and its range of application is still *sub judice*. Some authorities have recently advocated the employment of Cæsarean section in certain cases of primary inertia when the mother's life is in jeopardy. Primary inertia *per se* does not furnish the indication for such a procedure. Obstetric resources are amply adequate without recourse to surgery.

PUERPERIUM AND ITS COMPLICATIONS

Ward: The Treatment of Puerperal Sepsis at the Sloane Hospital for Women. *Am. J. Obst., N. Y.*, 1913, lxvii, 464. By Surg., Gynec. & Obst.

In the event that a puerperal woman delivered at the Sloane develops a temperature, she is considered at first as a case of sapræmia until it is otherwise demonstrated, and is treated as follows: On the first rise of temperature above 100.6° F. she is given a hot saline vaginal douche every 12 hours and an ice bag is placed over the fundus. Ergot is not given in such cases. If fever lasts for 24 hours or more, a hot saline uterine douche is given after a culture has been taken. In case temperature still is elevated after 24 hours and other symptoms supervene, the uterus is palpated under anæsthesia, and foreign material is removed digitally, and a saline douche of the uterine cavity is made. In case the woman has been delivered elsewhere, so that the condition of the uterine interior is unknown, then this exploration is made at the outset of infection symptoms. Thereafter, daily intrauterine saline is given as long as there is a cloudy return of the douche water in the presence of temperature. Should fever disappear or the discharge stop, intrauterine manipulation is immediately discontinued. When infection has invaded other parts, manipulations and examinations are reduced to the minimum, and nothing active is done except to incise when collections of pus form, vaginally when possible. In all cases supporting treatment is instituted, nutritious diet given, and the patient isolated. The head of the bed is elevated and ice is applied to the abdomen.

Ward says that nursing of the infants is always stopped as soon as sepsis is diagnosed. At Sloane a case has sepsis in case a "uterine temperature" persists for a week (unless the case dies earlier), and in case fever subsides earlier than this it is called sapræmia. He has observed no undoubted benefit from sera or vaccines. N. SPROAT HEANEY.

Findley: Treatment of Puerperal Thrombophlebitis. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Findley reported ten cases, reviewing the literature on the subject. With this review of his recent personal experience with puerperal thrombophlebitis, together with the expression of opinions of many of the workers in the field of obstetrics, he submits the following for consideration: 1. The Trendelenburg operation is surgically correct in theory, but as a practical proposition it is a questionable procedure. 2. The difficulties involved in the making of an accurate diagnosis before opening the abdomen are as yet insurmountable; furthermore, it is not possible to judge with accuracy the extent of the infection within the veins or elsewhere after the abdomen is opened. One cannot rely upon the sense of touch to locate with certainty the limits of a thrombus nor can we judge with certainty the presence or absence of pus within the veins. Failure to find bacteria in the general circulation gives no absolute assurance of the localized character of the infection, nor can a physical examination of the lungs and other viscera exclude the possible presence of metastatic foci. 3. It is in direct violence to the rules of practice to traumatize tissues in the immediate neighborhood of a virulent infection.

In reviewing the reports of cases the author has been seriously impressed with the boldness with which some operators violate this time-honored principle of surgery. If the infected veins are not dissected out, have they not locked the thief in the stable when they do no more than ligate above the zone of the infection? and if the infected veins are not dissected out do they not incur serious hazards in the way of disseminating the infection? Furthermore, the risk of dislodging a thrombus in exploring the pelvic veins should be reckoned with. 4. It is a physical impossibility to ligate all the veins leading from the genital organs and unless all channels are blocked there can be no assurance of check-mating the infection. Among the ardent supporters of the operation are those who would ligate the lower end of the vena cava and both spermatic veins, claiming that the collateral circulation can be depended upon to re-establish the return circulation. Is this not an argument in favor of the contention that the venous channels leading from the infected uterus cannot be wholly controlled by ligatures? 5. The physical resistance of all cases of puerperal infection is far below par, a fact which makes us cautious in adding further to their burdens. We might well rob them of the little resistance they possess. 6. Little dependence can be placed upon

serum and vaccines in these cases. 7. Whatever may be the views on the question of ligation of veins or upon the administration of serum and vaccines, all are agreed that the body resistance may be supported by fresh air and nourishing food.

MISCELLANEOUS

Taussig: Factors in the Formation of Skin Striations During Pregnancy. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

Taussig, said only thirteen out of sixty primiparae were free of skin striations. Skin striations occurred most frequently at several points and usually made their first appearance about the 6th or 7th month of gestation. In girls under 20 years of age, they were decidedly more pronounced and more frequently found than in older women. Obesity, particularly rapid increase in weight during pregnancy, predisposed to the formation of striæ, especially those about the breast and thighs. Lack of abdominal support during pregnancy, as in those who wear no corsets, favored the formation of abdominal striæ. On the other hand, the tense and inelastic skin in which such striæ were found was to some extent a factor in subsequent abdominal relaxation. At any rate, abdominal muscular relaxation and abdominal skin striation went hand in hand. Perineal tears had apparently no relationship to skin striation. Finally, the persistent employment of proper skin massage would, in the great majority of cases, prevent the formation of the slightest skin striations.

Fry: Demonstration of the Infant Pulmotor, with Remarks on Its Use in the Treatment of Asphyxia Neonatorum. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

The author said the introduction of the infant pulmotor into obstetric practice was so recent that he had not been able to collect any statistics of the value of the apparatus. Certainly it was vastly superior for resuscitation to the ordinary methods of artificial respiration. He had had no opportunity to test it in a serious form of asphyxia, the so-called asphyxia pallida, but in the livid form it had acted promptly and resuscitated the infant in about five minutes. Edgar said he had used the apparatus six or seven times in both asphyxia pallida and livida. The results were good, much better than he had anticipated, because at first he was doubtful of the value of the apparatus. Communication from Rochester reported the use of the pulmotor in five cases. In Case 2 it was unsuccessful. There was no heart action detected when the infant was born. In Case 4 it was likewise unsuccessful, but there was no mention of the heart action. In Case 1 the infant was born with marked asphyxia, but cardiac pulsations were detected. The labor had been prolonged but was terminated by mid-forceps application. The ordinary methods of resuscitation were employed for ten minutes without results. The

pulmotor restored life in ten minutes and the infant lived. Case 3. Pronounced asphyxia of the infant with heart action. After failure to resuscitate, the infant breathed after three or four minutes of the application of the apparatus. Case 5. A labor of thirty-six or forty hours' duration was terminated by a difficult, high forceps application. The infant had deformities of the extremities and had been born thirty minutes before the use of the pulmotor. The heart action was slow, eighty to ninety per minute. After forty to sixty minutes' use of the pulmotor, the infant breathed, but died two hours afterward. The condition of the infant suggested strongly the existence of intracranial pressure. Efforts to resuscitate the infant should not be abandoned as long as there was any heart action.

In discussing Fry's paper, EDGAR stated that he believed he had the first Draeger infant pulmotor that came into this country. It was more than a year ago. At first he looked upon the machine with more or less skepticism, thinking it was more of a plaything than anything else, but having used it for some time he found there was some value to it. They had one at the Manhattan Maternity which was ready for use in every operative case. They had had several cases which illustrated the value of the machine, but as Fry had said, the inspiratory force should not be run up to 25. He thought 10 or 12 centimeters of force was sufficiently high. Although he had made no autopsies to prove it, he believed there was some likelihood of rupture of vessels when they ran the inspiratory force up to more than 10 or 12 c.

POLAK stated that he would like to ask Fry if the pulmotor could be attached to the ordinary oxygen tank in case of emergency. Fry replied that they had an extra attachment so that it could be put on an ordinary oxygen tank.

Doazan: Etiology, Symptomatology and Surgical Treatment of Meningeal Hæmorrhages in the New-born (Etiologie, symptômes et traitement chirurgical des hémorragies méningées du nouveau-né). *Arch. gen. d. chir.*, 1913, vii, 10. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This paper discusses, principally, the surgical therapy of meningeal hæmorrhages in the new-born. The profuse hæmorrhages are generally productive of alarming symptoms. It is very important to study carefully the cases of hæmorrhage producing trifling symptoms as these may be followed by irreparable injuries. The correlation between labor and meningeal injuries has probably remained unrecognized to date because so long a time, sometimes several years, may elapse before any disturbances are manifested. MacMutt first called attention to the concurrent meningeal cicatrices with Little's disease. Hutinel suggested lumbar puncture in all asphyxiated new-borns: meningeal hæmorrhages would then be found much oftener. Etiologic factors are: narrow and rigid vaginæ; all abnormalities that prolong labor, as malpositions and instru-

mental extractions (these, according to Gowers, produce hæmorrhages in 20 per cent of the cases), the size of the child's head, the degree of ossification and like conditions. The hæmorrhages are also found in cases without trauma, e. g., in classical Cæsarean sections, due to the fragility of the blood vessels so common in hereditary taints (syphilis, alcohol). We must differentiate between spontaneous hæmorrhage and that produced during labor. Hæmorrhages in children are nearly always venous and occur most frequently in the subarachnoid veins. During labor the veins are torn either on account of injuries or increased blood pressure. Such hæmorrhages are most frequent in babies with soft, poorly ossified skulls that give poor protection to the underlying brain; secondly, in cases of rapid or sudden blocking or damming up of blood in the veins which is mechanically produced by asphyxia. These are the spontaneous hæmorrhages. A third etiologic factor is doubtful, viz., can the sudden bursting and emptying of the bag of waters produce hæmorrhage by negative pressure (or absence of counter-pressure)?

The symptoms vary in a marked degree. Sometimes the babe is cyanotic when borne; if treated scientifically at once, breathing is established but the child does not cry and, if not stimulated artificially, breathing soon ceases and the child dies.

In other instances, resuscitation is successful and the child cries but remains passive and will not take to the breast nor swallow. After 2, 3, 4 or 5 days symptoms of skull compression, epileptic convulsions, even Jacksonian epilepsy, rigidity, tremors or convulsions appear. Occasionally such symptoms will appear after a few days (up to the 6th day, Murphy) in a babe that appeared to be the picture of health. The pulse drops to 90 and the respiration is superficial, rapid and often irregular. The temperature chart is fairly accurate in the prognosis of these cases. If, in the first few days, a slight but persistent elevation of temperature is observed, the babe will live in most cases provided there is no infection. Elevation of temperature may be the only symptom of cerebral pressure. Hæmorrhage near the sulcus Rolandi produces at first circumscribed symptoms, monoplegia, often motor disturbances, tremors, convulsions, and, finally, affects only one of the lower extremities. The general health is impaired early. If the condition begins to improve, the life of the patient is no longer threatened, but later mental defects may appear. Permanent defects at the base of the frontal or parietal lobes are followed later by epilepsy, Little's disease, strabismus, deafness, defects of speech, facial paralyses, and many other pathologic conditions. It is very important that an early diagnosis of intra-cranial hæmorrhage be made as the success of therapy depends upon immediate action.

Formerly treatment consisted of the application of leeches to the processes mastoidei, baths, chloroform and ether inhalations, and later, lumbar puncture which does not always produce the desired

results. Finally the advice to operate came from America. Chipault suggested trephining the skull and incising the dura mater. The operation is simple and of short duration. Cushing was the first to perform this operation in 1903. He had nine such cases, of which four were absolutely successful. The operation was done between the second and the twelfth day. Three times it was necessary to do the bilateral operation. Technical details of the operation are described by the author. Seitz modified the operation by opening into the dura mater at the lowest point possible. Simmons avoided trephining by making a short curved incision from the large fontanelle along the anterior superior border of the parietal bone. After dividing the dura, the blood clots were removed. As a preparatory treatment he gives an injection of 30 cm. salt solution several times. This procedure was successfully employed by Gilles (Toulouse) in a case after lumbar puncture failed. If serious symptoms occur later, one can always resort to trephining. The surgeon should employ the methods in the following order: Lumbar puncture; if no improvement is noticed, the fontanelle incision should be made while the dura is still tense; trephining the skull should be considered last of all.

E. ZWEIFEL.

Ries: Chorionic Villi in the Uterine Wall 18 Years after the Last Pregnancy. *Am. J. Obst.*, N. Y., 1913, lxvii, 433.

By Surg., Gynec. & Obst.

Ries in this article gives complete history and microscopic findings in a case which he operated 18 years after her last pregnancy for multiple fibroids of the uterus. Protruding from a vein on the cut surface of the cervix of the uterus, which was removed supravaginally, was a fine thread-like string, which upon dissection could be traced as far as the cornu of the uterus. Microscopic examination showed a vein filled with villi which had undergone hyaline degeneration and which were covered with a single layer of endothelioid cells. The rest of the uterus, except for multiple fibroids, presented no unusual microscopic changes. Ries draws attention to this case of benign survival of chorionic villi for so long a period as of importance in the probable explanation of chorio-epithelioma at times remote from pregnancy.

N. SPROAT HEANEY.

Leonard: The Difficulty of Producing Sterility by Operation on the Fallopian Tubes. *Am. J. Obst.*, N. Y., 1913, lxvii, 443.

By Surg., Gynec. & Obst.

Leonard reviews the various proposed methods of producing sterility by operations upon the tubes, and relates the reported instances of pregnancy following the various operations, reporting two cases of pregnancy occurring after ligation of the tubes. He concludes that, classically and experimentally, the wedge-shaped excisions of the uterine ends of the tubes has been the most satisfactory means so far devised.

N. SPROAT HEANEY.

Rongy: The Use of Foetal Serum to Cause the Onset of Labor. *N. Y. St. J. M.*, 1913, xiii, 119.
By Surg., Gynec. & Obst.

The author reviews the experiments of Von der Heide, who was the first to use foetal serum in the induction of labor and for inertia of the uterus, and reports 19 cases in which he used the serum. He followed the methods and dosage of Heide with some slight modifications to suit the individual case. The serum was prepared as suggested in Heide's original paper and injected intravenously. Although the results were negative in 7 of his cases, and at least in 8 of the cases reported by Heide, he believes that it has been demonstrated that foetal serum will cause the onset of labor.

"Von der Heide considers his results in reference to the onset of labor as an anaphylatic reaction. He thinks that normally the birth act is brought about by the slow transmission of foetal substances into the blood of the mother, which give rise to the formation of antibodies—"labor substances," as he terms them. Toward the end of gestation these substances are transmitted to the blood of the mother in excessive amounts. That there is a deluge of these substances is proven by the contractions which arise in the last weeks of pregnancy and also by the uniform results obtained by the injection of foetal serum in inertia."

C. H. DAVIS.

Pari: Hypophysis Extract in Obstetrics (*L'estratto ipofisario in ostetricia*). *Gazz. d. osp. e de clin.*, Milano, 1913, xxxiv, 84.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The indications for administering the extract are atonic hæmorrhages and weak pains. The experiments did not correspond and hence opinions differed, owing to the inconstancy of uterine effects that were often overshadowed by the secondary effects, such as discomfort, tinnitus auricum, fear, etc., and, objectively, as albuminuria and even eclampsia. Unfavorable effects upon labor pains were infrequent; sometimes the uterine contractions were tumultuous or tetanic, threatening the life of the babe in utero. Rarely there occurred atonic hæmorrhage an hour after labor, due, no doubt, to the relaxation of the musculature following the artificial stimulation. Hamm-Rieck found a stricture of the internal os resulting from the injection. Eisenbach found the results not to be uniform in consequence of the different dosages, indications and sensitiveness during the various periods of gestation. The response is greatest towards the end of gestation and almost negative during the first half. The different parts of the gland are different in their effects. Pituglandol Roche contains .1 gland substance in cc.; dose 1-2 cc. intramuscularly. Repeat in one or more hours. If the contractions cease, become weaker or less frequent, the author gives stronger doses repeatedly. In thirty cases Eisenbach found the labor pains to be of physiologic characteristics, never colicky nor tumultuous, though

occasionally the uterus remained tense during the interval, but never was there cause for anxiety.

The first contractions occurred 3-10 minutes after an injection; the maximal power appeared in 30 minutes, generally, and decreased in another 30 minutes; infrequently the effect lasted until labor was completed. Never were injurious effects noticed upon mother or babe. It is of practical importance that there never was anything pathological found post-partum which could be attributed to the extract. The after-pains were never specially severe. In eighteen of the author's cases, the effect was unsatisfactory in five and prompt in eleven.

Eisenbach claims this preparation to be efficacious and necessary, as in numerous cases of atonic hæmorrhage results were rapidly obtained. Massage and ergotin were resorted to in all cases and, when these failed, pituglandol was injected with good results. The author arduously recommends pituglandol, especially when ergotin fails. Eisenbach says: Pituglandol is not infallible in producing labor pains but it is the best method available for that purpose, at present. The proper selection of this extract insures favorable results in cases of weak contractions and often prevents the application of forceps and other artificial means of delivery. Abortion is not induced. The extract is specially indicated in atonic hæmorrhages.

BERBERICH.

Edgar: Pituitary Extract in Uterine Inertia. *Tr. Am. Gynec. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

Edgar reported seventy cases of which records had been kept, and these cases were from two hospital services, namely, Bellevue and Manhattan Maternity, and from private practice. They included in the first and second stages of labor, thirty-nine cases; immediately after the third stage, nineteen cases; in Cæsarean section six cases; and for the induction of abortion six cases. He drew the following conclusions: 1. Ampules or vaporales of the drug should alone be employed, as in his experience constant results failed when the pituitary extract in bulk solution was used. 2. There were three reliable proprietary preparations of the drug now on the market; all of these were used at different periods in his cases. 3. For decided action 0.4 gram of the drug was usually called for, although in ordinary cases, with little obstruction, half that dose was found sufficient. 4. As the effect of the drug lasted but 30 minutes, repetition of the dose was often called for. 5. Intramuscular injection was usually satisfactory, causing no local reaction or pain. Further, no toxic symptoms were observed from the use of the drug even in maximum doses. 6. Pituitary extract might be combined with ergot when the action of the former failed, and with heart stimulants in shock cases, without compromising the actions of these drugs. 7. Pituitary extract had no place in normal labor; the administration should be confined in obstetrics to instances of primary and secondary inertia, to post-partum

hæmorrhage and Cæsarean section, in the last as a substitute for ergot. 8. The drug produced strong intermittent uterine contractions often prolonged for several minutes. He had never observed true continuous tetanic uterine contractions (tetanus uteri). 9. Although theoretically the uterine contractions were intermittent, practically in the face of resistance, the contractions approached to the continuous in character and clinically might be so reckoned with. 10. Full and even small doses of the drug in the first stage of labor had caused in his cases fatal compression of the fœtus, premature separation of the placenta, and deep rupture of the cervix. 11. In the first stage or where some obstruction existed in the second stage, he gave small tentative doses of pituitary extract, not with complete delivery by means of the drug in view, but to bring the head within easy reach of a simple forceps operation. Seven of his thirty-nine cases were thus treated. 12. Pituitary extract acted promptly and efficiently in most of the thirty-nine cases of inertia in the second and first stages. Its actions were more positive in multiparæ than in primiparæ; it acted better at full term than in premature cases; also better in the second than first stage of labor, and when administered shortly after the spontaneous artificial rupture of the membranes.

In the eighteen cases in which the drug had been used immediately after the third stage, for post-partum hæmorrhage due to inertia, his results were disappointing, so much so that he considered its action here most unreliable and not as positive as the ergot preparations.

In eighteen post-partum cases, he found no effect of the drug in two cases; it was necessary to use ergot in two instances; hot acetic acid douche in two more; to pack the uterus in seven cases, and in the remaining six cases only were good uterine contractions observed.

13. In Cæsarean section he could not observe any advantage of pituitary extract over ergot, aside from the observation that the former acted more promptly and hence need not have been administered so early in the operation. 14. In induction of labor the drug failed to initiate contractions, but apparently initiated them after the use of gauze, the bougie or hydrostatic bag for inducing labor. His belief was that the drug strengthened already existing contractions not yet apparent to patient or physician. 15. For primary inertia in abortion cases his results with the drug were disappointing. 16. For atony of the bowel and bladder and as a galactagogue his results were frankly negative. 17. The dangers to mother and child in the indiscriminate administration of this drug for primary or secondary inertia of the first or second stage of labor must be reckoned with.

Only a few of the thirty-nine cases of inertia were frankly in the first stage of labor and these were earlier cases. The remainder were of the second stage, or borderline cases just merging into the second stage.

He considered the use of the drug in the first stage a dangerous practice, liable to cause death or deep asphyxia of the fœtus, separation of the placenta, uncalled-for laceration of the cervix, and possible uterine rupture.

18. Of his thirty-nine cases of inertia in the first and second stages, he had to report two and probably four stillborn children, deaths due, in his opinion, to the use of pituitary extract before full dilatation, and three instances of deep laceration of the cervix requiring suture to control the bleeding. 19. He looked upon the use of pituitary extract before full dilatation or dilatibility of the cervix as equivalent to the use of ergot at this time. In fact, it was probably more harmful than ergot, by reason of the more powerful contractions produced and the uncertainty of its action. 20. He had repeatedly observed prolonged tempestuous contractions, when the drug was given in the face of too much resistance, closely simulating tetanic contractions of the uterus (tetanus uteri). 21. The action of the drug was most uncertain. One could never predict in a given case, either from the amount of the drug administered, or from the character of inertia and the obstruction to be overcome, how powerfully the drug would act upon the uterus. 22. He had repeatedly observed both in private and hospital practice 0.2 gram of pituitary extract, half the usual dose commonly employed, produced such prolonged and powerful uterine contractions that uterine rupture was imminent and anæsthesia was required to control the action of the drug on the uterus. 23. In his opinion the drug should never be employed for inertia in any stage of labor, unless anæsthesia was at hand for immediate use, and preparations complete for immediate operative delivery, if necessary, to avoid uterine rupture. 24. Finally, with due regard to its action, and possible dangers, pituitary extract was a most valuable addition to our resources for the treatment of primary and secondary inertia.

Bobrie: Arsenobenzol in Obstetrics (L'arsénobenzol en obstétrique). *Ann. d. med. vën., Par.*, 1913, viii, 55. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

At the fifteenth Congress of the Obstetric Society of France the author presented a review of the reports on salvarsan therapy in obstetrics. Sauvage, according to the observations of his own cases and a study of cases collected from the literature (142 cases in all), is very reserved in his opinion regarding the merits of this remedy and does not intend discontinuing the old mercury treatment. Sauvage employs the new method only in cases not benefited by the old treatment, and mentions the manifold disturbances caused by salvarsan treatment, especially its ill effects upon the liver and kidneys. Chambrelent tabulated all cases reported to date of children treated by salvarsan therapy. The results of indirect treatment, viz., by the milk of mothers injected with salvarsan, are not at all satisfactory, as in most cases relapses have occurred. Salvarsan

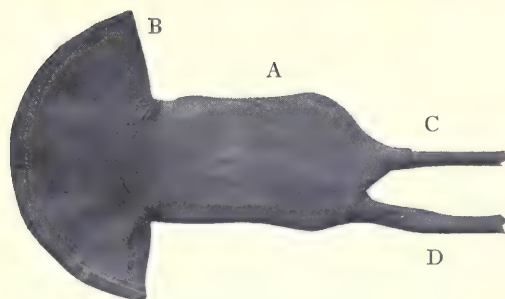


Fig. 1. (Good.)



Fig. 2. (Good.)

subcutaneously administered has not yet shown satisfactory results. The maximal dose is 10-15 milligrams of salvarsan per kg. of body weight. The intravenous injection is too dangerous in children. Fabre and Bourret also believe that the old mercury treatment should be continued, but recognize salvarsan as a valuable addition to medicinal agents for coping with lues. By combining salvarsan with mercury and iodine therapy, syphilis is more energetically attacked and more speedily improved. Though the children of mothers treated with salvarsan manifested no symptoms of syphilis during their short stay at the clinic, yet relapses occurred later, according to the investigations of Lemeland and Brisson. These observers claim that neither salvarsan nor neosalvarsan are well adapted for general practice, owing to the difficulty of administration, etc. Bar records few favorable results and has had some unfortunate experiences. The most celebrated French obstetricians do not subscribe to the dermatologists' enthusiasm for salvarsan.

PENKERT.

Good: A New Obstetrical Rubber Bag. *Surg., Gynec. & Obst.*, 1913, xvi, 329.

By Surg., Gynec. & Obst.

No longer can there be any doubt as to the efficacy of the rubber bag in dilating the parturient cervix. A rubber bag filled with water exerts an equal pressure in every direction, consequently it is the nearest approach to the amniotic bag of waters.

The author feels that the ideal bag is one that will exert an equal pressure everywhere (a pressure on both the entire cervix and the lower uterine segment) that will not displace the head, and that is easy of introduction.

Fig. 1. shows the bag before it is filled with water. It is mushroom-shaped and has two separate compartments. Compartment A is for cervical pressure, and compartment B for pressure on the lower uterine segment. Tube C is for filling compartment A, and tube D, which runs directly through compartment A, is for filling compartment B.

Fig. 2 shows the bag with both compartments filled with water. Compartment A is 3 inches long

and 1½ inches in diameter. Compartment B is 3½ inches in diameter and ¾ inch from its base to its top, thus causing but little displacement of the head.

This bag has been used in several cases with excellent results.

McDonald: Diagnosis of Early Pregnancy. *Am. Med.*, 1913, xix, 169. By Surg., Gynec. & Obst.

The author believes that the most important signs from which early pregnancy is to be deduced are those found on vaginal examination. These he divides into two groups: First, the congestive signs: blush and flush of the vaginal mucosa, blush and softening of the cervix. Second, the uterine signs, including enlargement of the uterus, softening of the uterus, intermittent uterine contractions, Hegar's sign, and the author's sign.

A table of 100 cases arranged in percentage order gives the frequency of the above signs in the early weeks and in which weeks they most often appear.

In the congestive or Jacquemin's sign the author calls attention to the fact that the violet spot appears first on the anterior vaginal wall about a thumb's breadth below the urethra. The cervical blush appears about the tenth to twelfth week in the majority of cases. Softening occurs at about the same time and begins on the outside and extends inwards.

The early enlargement of the uterus is asymmetrical in nearly one half the cases before the seventh week and only uniformly enlarged at the tenth week after the last period. The uterus takes on a soft doughy consistency with hard button-like spots in it. These spots disappear at the tenth week.

The author's sign of flexibility of the isthmus, or "Hinge Sign of Pregnancy," as McDonald calls it, is present in 97 per cent of his cases recorded. To elicit it, the bladder is first emptied completely, then the fundus is brought forward with the abdominal hand. The vaginal hand presses upward and forward on the cervix, the isthmus in early pregnancy bending easily so that the uterus and cervix may lie practically side by side. "Flexibility of the isthmus is in itself an expression of this sign."

EUGENE CARY.

GENITO-URINARY SURGERY

KIDNEY AND URETER

Caulk: Incrustations of the Renal Pelvis and Ureter. *Tr. Am. Ass. Genito-Urin. Surg.*, 1913, May.
By Surg., Gynec. & Obst.

The author presents four cases of incrustations with calcium salts along the upper urinary tract. In the first case these were located around one of the renal papillæ; in the second, they lined the posterior wall of the pelvis, and in the third, an incrustation about one and one half inches long was present in the upper ureter, and one, about three fourths of an inch long at the juxtavesical ureter. The author starts with a brief review of the causes of calcareous infiltration, and states that the great majority of authors agree that necrosis is the prime factor in such formations. Among the predisposing influences are mentioned such diseases as typhoid fever, diphtheria, cholera, auto-intoxications, icterus, eclampsia, gout, and diabetes. Poisons which may predispose to this disease are cantharides, corrosive sublimate, chromates, oxalic acid, aloin, glycerin, phosphorus, arsenic and vinylamin.

The rationale of the deposition of salts in the area of necrosis is not definitely established. Various theories are: the presence of fatty acids with which the calcium may form insoluble soaps, and proteids capable of uniting with calcium and phosphorus, have all been advanced as determining factors.

The cases within the renal pelvis were diagnosed as renal calculus and the true nature of the lesions was only determined at operation, which was nephrotomy. The author believes that nephrotomy is the operation of choice in such cases, as pyelotomy would not provide sufficient exposure to insure the complete removal of the incrustation.

The diagnosis of the ureteral cases was made on the following points: First, a faint X-ray shadow; second, passage of crushed eggshell-like material, after manipulation with the ureter catheter; third, passage of the catheter through the obstruction, relieving the patient of symptoms, X-ray shadow still persisting and finally the disappearance of the shadow after several manipulations with the ureter catheter. This seems to differentiate the true incrustation from a calculus or sandy impaction.

In the treatment of the incrustations along the ureter the author mentions three procedures: First, the exposure of the ureter and opening it along the whole length of the incrustation and removing all of the material under the guidance of the eye. This procedure, he believes, should only be attempted as a last resort as the chance of secondary stricture would be extremely grave, and in all probability nephrectomy would have to be the final issue. The

second procedure consists of opening the ureter and by means of a small blunt curette, which is introduced into the lumen, removing the calcareous material. Third, removal by means of the ureter catheter. This last procedure is believed to be the method of choice, at least it should be given a trial before more radical measures are attempted. By this method the author was able to remove completely the incrustations of the two cases reported.

Oppenheimer: Pyelitis (Die Pyelitis). *Ztschr. f. urol. Chir.*, 1913, i, 17.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Oppenheimer details carefully the pathology of pyelitis after observation of 100 cases, seventy-six of which were under his care. In the vast majority of cases the coli bacillus was present; in two instances a new finding was noted inasmuch as the bacterium fecalinum alcaligenes was isolated. In regard to the manner of infection, Oppenheimer suggests the following opinions:

If a remote pus accumulation is considered to be the source of infection, the infection of the renal pelvis takes place via the blood stream. Such is also the case even when the original source of infection is unknown and where there is an obstruction of the ureter high up and the distal part of the urinary tract is found negative. In case of inflammation of the lower urinary tract (trigonitis) with changes in the ureteral orifices, esp. in lower placed obstruction to the ureter, then an ascending type of infection is probably present. He details further symptomatology, course and diagnosis of the various types of pyelitis; the unusual gonorrhœal, the pyelitis following intestinal disturbances, pyelitis as an effect of stuprum, and pyelitis of children, especially that of little girls. While ascending infection is possible, Oppenheimer considers the descending type as more likely to obtain in the majority of cases, inasmuch as cystitis is often absent. Two cases were observed after infectious diseases. In regard to the pathogenesis of pyelitis in pregnancy Oppenheimer believes that infection is of first importance and passive congestion of secondary consequence. Therapeutically, the following fundamental principles were followed:

Every acute pyelitis is to be treated conservatively, unless there is some definite reason otherwise; namely, by rest in bed, the use of large amounts of fluids and urinary antiseptics. Alkali mineral waters are contra-indicated, rather drop doses of HCl. For the first week a strict milk diet is permitted, then for the next ten days a milk and vegetable diet. The patient remains in bed for ten days after all fever has disappeared. Forced intake of fluids,

according to Rovsing (6 to 10 liters per day), is admissible. As urinary antiseptic salol in large doses is given (4 to 5 gm. daily). In spite of the presence of phenol in the urine, no renal lesions or disturbances have been noted, and no miscarriage precipitated. Instead urotropin in large doses may be advised (4 to 5 gm.), especially in after-treatment. The use of borovertin, hexal, etc., demonstrated no better results than the afore-mentioned drugs. In seven cases the patients were to rest in bed on the back and not to turn on the side.

The author noted no influence from vaccine treatment tried in two cases. The great majority of acute pyelitis cases recover on this mode of treatment, though it may require several months and after repeated recurrences. Ureteral catheterization in the acute stage is indicated either with or without lavage of renal pelvis, only in the presence of intense congestion, severe pain and poor general condition of the patient. Its use in the subacute type is recommended when the fever does not spontaneously disappear. With this condition as indication, Oppenheimer catheterized the ureters in three cases with excellent results, while during the acute stage he made use of the procedure but once, and then without any benefit. Lavage of the renal pelvis is uncertain; permanent drainage for fourteen days is recommended. While the author does not consider nephrotomy a harmless procedure, when other methods fail in severe cases it must be resorted to.

KNORR.

Ertzbischoff: The Pathological Physiology of Renal Decapsulation and the Indications and Contra-indications for the Operation.
Am. J. Urol., 1913, ix, 138.

By Surg., Gynec. & Obst.

The author reviews concisely the pathological and experimental work bearing on renal decortication, its effect on the renal tissues and the resulting physiological changes, concluding with indications and contra-indications for the operation.

He does not support Edebohl's theory of the pathology; i. e., that regeneration and proliferation of renal epithelium occurs, besides "neovasularization." He points out that clinically there are often striking immediate results, such as cessation of pain and hematuria, increase in diuresis, etc. He mentions Jaboulay's theory of vasomotor change in renal vessels resulting from stretching of the sympathetic nerve-fibres in the pedicle. While Claude and Balthazard have shown experimentally that the proportion of urea and salts excreted are increased, he believes it is generally agreed that this is not due to actual increased blood supply; but, according to Mongour, is the result of lessened intravenous tension and consequent rise of arterial pressure within the kidney, causing improved elimination.

The ulterior effects, cessation of œdema and diminution in amount of albumen are not constant; but heart and eye conditions are usually benefited.

There is no evidence to support the fear that future trouble may arise from the contraction of the new-formed capsule or adhesions about the kidney. Excepting Edebohl's, there are no case reports tending to show the operation to be curative. The author believes it merely to be palliative by lessening any temporary renal insufficiency which is superadded to the nephritic lesion. It may, however, arrest the evolution of the nephritic process.

He mentions indications for the operation in acute and chronic cases, and discusses briefly the question of unilateral or bilateral decortication, and the use of renal sufficiency tests in diagnosis of the lesion.

H. BINNEY.

Pousson: Contribution to the Surgery of Nephritides (Beitrag zur Chirurgie der Nephritiden). *Berl. klin. Wchnschr.*, 1913, l, 381.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In order to place the surgical treatment of the nephritides on a broader basis in the future, it is necessary to establish the indications and contra-indications exactly. Nephrotomy removes the intrarenal tension, further it relieves the organ by the copious hæmorrhage, through which microbes, necrotic epithelium blocking the urinary tubules and toxines are swept away and, finally, the various secretæ are removed by the prolonged drainage of the pelvis of the kidney. The effect of splitting the kidney must be considered in both forms of acute nephritis, the toxic as well as the infectious. Surgical intervention is urgently required when internal remedies, as diuretics, venesection, etc., fail and when in addition to fever with a severe general disturbance a diminution in the quantity of urine secreted takes place. Nephrotomy must be considered first, then decapsulation; not nephrectomy, because the kidney as an excretory organ, even when itself diseased, helps to eliminate toxic-infectious bodies from the organism. Among the chronic nephritides the painful forms will be the first discussed. The pain originates partially from the pressure exerted by the sclerosed capsule on the organ, partially from the congestion of the parenchyma produced by the morbid process. The "painful" nephritides are only exceptionally Bright's, more often they are caused by nephrolithiasis, inflammatory affections of the adnexa, trauma, etc. Among the operations to be considered for this form of chronic nephritis preference must be given to nephrotomy, which may be combined with capsulectomy. The hæmaturic nephritides are characterized by being mostly partial, i. e., the process is confined to small areas of the parenchyma. The circulation is disturbed by these lesions; there is a stasis of blood in the capillaries and canals, which easily leads to rupture of the atrophic and diseased vessels. Here also nephrotomy can regulate the swelling of the parenchyma. Pousson secured more favorable results with it than with nephrotomy. The chronic nephritides, which are complicated by severe and threatening symptomatic accidents, and in which, therefore, palliative

treatment should be instituted, present the three chief symptoms, oedema, uræmia, and oliguria, either singly or in various combinations. Among 153 cases treated by operation, sixty-three operative deaths are to be recorded, i. e., a mortality of 41 per cent.

Of ninety cases, twenty-four died after an interval of three months to two years from accidents which must still be brought in connection with the chronic nephritis, or from recurrences; those operated for uræmia remained alive for the longest time. Sixty-six are living and were observed over larger intervals. The operative mortality is the least in patients suffering only from oedema, and the greatest when uræmia and oliguria without oedema are present. A middle place is occupied by the cases with oedema and uræmia, which are still favorable, compared with those presenting all three symptoms. Among the sixty-six observed for a longer time, there were registered twenty-three markedly improved, twenty-five improved, three slightly improved and six without improvement. The ocular disturbances in the course of the disease must also be considered among the indications, as functional disturbances do not contra-indicate operative interference, while in the presence of anatomical changes an operation must be considered with great reserve. Further contra-indications are myocarditis, atheromatous degeneration of the larger vessels, and severe pulmonary phenomena. Decapsulation was carried out in the majority of cases; but even here nephrotomy is justified, notably in severe uræmic intoxication. The question, whether operation (decapsulation or nephrotomy) can provoke a healing of the morbid process in the kidney, Pousson would answer in the negative; but, at any rate, the relief of pressure in the organ produces a compensatory hypertrophy of the uninjured areas.

RUBRITUS.

Henschen: Nephropexy by Suspension with Transplanted Fascia (Nephropexie vermittelt transplantativer Bildung einer fascialen Aufhängenkapsel). *Arch. f. klin. Chir.*, 1913, c, 962.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Henschen has developed a method of operation for floating kidney which obviates the disadvantages of unipolar fixation. It consists in enveloping the organ in a large non-pedicled flap of fascia lata. He employed this procedure in one case with success. The patient was a slender woman, 32 years of age. A flap 20-15 cm. was taken from the fascia lata. This flap was divided in half by a longitudinal incision up to its center; here a hole was cut for the hilus of the kidney. The fascial flap was then folded about the kidney and fixed by fine silk sutures. Finally the fascial flap was attached to the quadratus lumborum, the lumbodorsalis and the muscles of the posterior wall of the renal niche. The result was good and permanent, as could be ascertained at a subsequent examination.

NORDMANN.

Legueu: The Clinical Value and Interpretation of the Constant of Urea Secretion (Valeur clinique et interprétation de la constante uréo-sécrétoire). *J. d'Urol.*, 1913, iii, 289. By Journal de Chirurgie.

Nephritis, usually of a mixed type, is present in all cases of obstruction of the lower urinary tract; there is also a varying degree of arterial hypertension; in the blood there is an excess of nitrogen or chlorides, or both.

Legueu dwells upon the symptom-complex due to nitrogen retention in the blood, and shows the value of Ambard's constant of urea secretion and how it completes the dosage of the blood urea, and how it must be interpreted in surgical work. This constant is based on the following laws of urea excretion, as set forth by Ambard: (1) When a kidney eliminates urea under a constant concentration, the output varies in direct proportion to the square of the urea concentration of the blood; (2) when, the urea concentration of the blood remaining constant, the concentration of the excreted urea varies, the urea output is in inverse proportion to the square root of the urea concentration of the blood; (3) when the urea concentration of the blood and that of the urine both vary, the urea output varies in direct proportion to the square of the urea concentration of the blood, and in inverse proportion to the square root of the urea concentration of the urine.

There is, therefore, in all individuals, a constant proportion between the urea content in the blood and the square root of the urea output; which proportion is the *constant of urea secretion*. Said constant is normally about 0.070. When the power of urea excretion of the kidney is impaired, it rises and approximately reaches 0.100 in individuals having lost about half of their excreting power. These figures are accepted as a basis for the clinical interpretation of Ambard's constant. Other pathological conditions lower the constant, for instance, nephritis of the dropsical type (called by French authors hydropigenous), and albuminuria. Consequently, a lowering of the constant is almost as important as a raising of the same and a figure markedly below 0.070 is suggestive of hydropigenous nephritis.

In renal surgery the study of the constant of urea secretion is a safe guide for operative indications and contra-indications. It is particularly valuable when ureteral catheterization cannot be performed or when, after ureteral catheterization, there remains a doubt as to the value of the supposedly sound kidney, or when bilateral lesions are suspected. If the constant is above 0.120 the lesions are very likely bilateral; if below 0.110, the other kidney is sound and nephrectomy is indicated.

The same constant affords valuable data in the surgery of obstructions of the lower urinary tract and particularly when it comes to deciding for or against prostatectomy. Cases of prostatic hypertrophy belong to one of the three following groups: (1) Those having a high constant, 0.200, or more; the nitrogen content of the blood is also high, 1 gm. or more. These patients are inoperable, at least

temporarily, until preliminary treatment and diet bring about improvement. (2) Those having a low constant, 0.120 or less; these are good risks, provided the low constant be not due to a concomitant hydropigenous nephritis. (3) Those having a constant varying between 0.120 and 0.159, with a nitrogen content in the blood of about 0.40 to 0.70 gm.

But, in all cases, the results of the study of the constant of urea secretion must be interpreted and qualified by the parallel study of the elements characteristic of hydropigenous nephritis, namely, albumin and disturbances of the excretion of water. The constant is a safer criterion than all other known tests of renal function. It clearly brings out operative contra-indications, and enables us to select the time for operating when interference is fraught with the least danger for the patient.

J. TANTON.

Fromme and Rubner: Tests for Renal Sufficiency by Means of Phenolsulphonphthalein (Die Nierenfunktionsprüfung mittels des Phenolsulphonphthaleins). *München. med. Wchnschr.*, 1913, 1, 588.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Fromme and Rubner find that the intramuscular injection of phenolsulphonphthalein, as a means of testing kidney function, is not to be recommended. This is in contradiction to the opinions expressed by Rowntree and Geraghty and also the results obtained by Autenrieth and Frank. The authors base their conclusions on tests made with phenolsulphonphthalein on 120 women with normal kidneys. While the above mentioned contributors find that in normal persons after two hours at least 60 per cent, and usually 60-85 per cent, of the preparation is excreted Fromme and Rubner find only 52.78 per cent excreted after two hours. Only after three hours could they determine 60-85 per cent and to even this they found exceptions in normal individuals. In five cases among sixty observations after repeated examination 60 per cent was never reached, and the amount excreted varied between 39 per cent and 60 per cent. Inasmuch as the conditions of resorption are so varied the intravenous exhibition of the drug is to be recommended. By this method on an average 76 per cent is excreted in three hours; never less than 60 per cent and usually much more, up to 90 per cent.

Fromme and Rubner find that the excretion of phenolsulphonphthalein begins after 5-11 minutes when injected intramuscularly.

KNORR.

Strassmann: The Influence of Collargol Injection Into the Kidney and the Kidney Pelvis (Über die Einwirkung von Kollargoleinspritzungen auf Niere Nierenbecken). *Ztschr. f. urol. Chir.*, 1913, 1, 126.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After employing Voelker's and Von Lichtenberg's diagnostic method of injecting the urinary tract with collargol to make it visible by X-ray, Oehlbecker observed areas of necrosis, infraction and cast formation in a case in which the renal pelvis had been in-

jected under rather high pressure. Zacharisson found casts one year after injecting a healthy kidney. Jewell reports embolic gangrene and Eckehorn oedema of the kidney. Rössle observed a fatal case of collargol poisoning in a patient with a hæmorrhagic diathesis resulting in parenchymatous hæmorrhages from the stomach, bowel and lungs, with bleeding into visceral cavities. Microscopic examination showed erosion of the mucosa of the renal pelvis and infiltration of the underlying medullary tubules, the collargol having precipitated in small dark brown clumps. The solution had penetrated the kidney tubules and had even reached the convoluted tubules under the capsule. Here and there the tubules had been ruptured. Blum describes a series of injuries after collargol injection which he observed on kidneys removed post-mortem and by operation. After emphasizing the fact that the investigations of Blum were not conclusive, since in dead kidneys it is very difficult to distinguish between actual necrosis and cadaveric degeneration, Strassmann endeavored to show the influence of collargol on the renal pelvis of rabbits. The ureters were ligated just above the bladder and after the obstruction to the urine had produced dilatation the ureters were incised and canula was inserted. Through this the renal pelvis was injected under moderate pressure with one or two cc. of a 1 to 4 per cent collargol solution. These investigations showed that part of the collargol remained for a considerable time in the renal pelvis, while some rapidly diffused through the connective tissue and by this route soon reached the cortex. Where the collargol had penetrated the connective tissue, the author could not see any changes in the epithelium and holds that the solution travels by the normal connective tissue spaces. Invasion of the urinary tubules could not be demonstrated. In fact, after carefully filling the pelvis the author could detect no injury to the kidney and he therefore concludes that his animal experiments justify the opinion that the injection of collargol in proper amounts and under moderate and careful pressure into the renal pelvis does not produce harmful results and in no way brings about noteworthy changes in the pelvis of the kidney.

LEUENBERGER.

BLADDER, URÉTHRA, AND PENIS

Woolsey: Three Unusual Cases of Rupture of the Bladder. *Tr. Am. Surg. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The usual cause of rupture of the bladder, in the absence of pelvic fracture, is injury to a full bladder. Rarely the bladder has not been full and then the rupture is extraperitoneal. In some cases there is no history of trauma (idiopathic rupture) but usually there is some underlying cause such as urethral stricture, hypertrophy of the prostate, vesical calculus, etc., leading to overdistension or sacculation of the bladder. Apart from such cases, idiopathic rupture is rare.

Case 1 was alcoholic. After drinking heavily he urinated at midnight, went home and was awakened at 4:00 A. M. by violent abdominal pain, which proved to be due to intra-abdominal rupture of the bladder. Trauma was denied but can never be excluded in alcoholics. The rupture may have been due to overdistension, with or without muscular action, which may produce rupture. Alcoholism predisposes to rupture by causing rapid distention, obtunding the bladder sensitiveness, and relaxing the abdominal muscles which guard the bladder from injury. It is a question whether the normal bladder ever ruptures spontaneously without the presence of pathologic changes.

Case 2 was alcoholic, but not drunk. No history of trauma or previous bladder trouble. Sudden onset, six days before, with symptoms of appendicitis, nausea and vomiting, pain and tenderness in the right lower quadrant, etc. Two previous, similar slighter attacks. When seen condition was very poor, constant hiccoughs, poor pulse, etc. There was a mass in the right lower quadrant, which was found to be due to a large quantity of ammoniacal, purulent urine, situated retroperitoneally. The X-ray showed no stone and cystoscopic examination revealed a transverse rent behind the right ureter mouth. Urine was alkaline and passed mostly through incision for some time. No sign of ulcer in bladder. The appendix was normal. The patient made a slow but perfect recovery and has remained well since—two years.

In Case 3 the bladder was full but the trauma was indirect, being due to a fall from the first floor fire escape while asleep. There was no pelvic fracture. The rupture was extraperitoneal, but some urine was in the peritoneal cavity, though no peritoneal tear could be found. Only part of a measured amount of fluid was injected, and returned by catheter.

This procedure is seldom necessary and always unwise, unless followed by operation at once, if rupture is present. The danger, however, is due to the catheterization rather than the injection of fluid. The chief danger of infection is from an infected urethra. Sterile urine does not cause peritonitis, but if it has no free outlet it may become decomposed and cause irritation.

Catgut is preferred to silk for suture. Trendelenburg position is very valuable in suturing tear in bladder. Bladder drainage by permanent catheter is preferable, unless there is infection of the urethra. The first case died of pneumonia on the fourth day; the others recovered.

Van Dam: The Radical Treatment of Congenital Diverticulum of the Bladder (Die radikale Behandlung angeborener Blasendivertikel). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 320.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports a case of a large diverticulum in the posterior wall of the bladder in a man 55 years old. The patient had hæmaturia for five years,

dysuria for three months and retention for two days. Was operated on without further examination on a diagnosis of prostatic hypertrophy. Through the supra-pubic incision a diverticulum 14.5 cm. long was discovered, the true nature of which was determined after opening the peritoneal cavity. The diverticulum was drawn out by means of forceps, tipped over towards the bladder and removed. Recovery good. Histological examination confirmed the diagnosis of a true congenital diverticulum of the urinary bladder. Fifteen cases of radical extirpation of diverticula of the bladder were collected by the author. There were ten cases of diverticula of the anterior or lateral wall of the bladder without a ureter in the wall. For the extirpation of these the extravascular route is indicated. In three cases the location was the same but the ureter coursed through the wall of the diverticulum. These were operated on by the combined extra- and intra-vesical route. In only two cases, treated radically, was the diverticulum on the posterior wall and the author's case was the only one that was operated on by the purely transvesical method.

VON LICHTENBERG.

Kelly and Lewis: Skiagraphic Demonstration of Vesical Tumors. *Surg., Gynec. & Obst.*, 1913, xvi, 308.
By Surg., Gynec. & Obst.

As a rule, tumors of the urinary bladder offer as little resistance to the passage of the X-rays as do the normal parts; consequently, no matter how large the tumor, a skiagram made of the unprepared bladder with its contained growth will show neither bladder nor tumor.

The bladder shadow is easily obtained by injecting air, water, or any of the less permeable media; though this method will not satisfactorily show the boundaries of the contained growth. It is then necessary to resort to a slightly more complicated method of procedure.

The first illustration showed a large papilloma of the bladder. A suspension was made of bismuth subnitrate, gum tragacanth, and water. This was shaken up and rapidly run into the bladder, and the radiogram taken at once.

The bismuth evidently settled from the emulsion and filtered into the interstices on the irregular surface of the growth. As a result of this precipitation the cauliflower-like outline of the tumor is beautifully shown. The mass is a conglomerate of large growths. About the tumor is seen a dark zone, which represents the remainder of the bismuth suspension. The gray area above it is accounted for by the presence of air or water.

In the second case the authors deal with a vesical papilloma. In this instance it directly overlies the internal meatus of the urethra.

Here, instead of bismuth suspension, 40 cc. of a 5 per cent silver iodide emulsion was injected into the bladder. About half the amount injected was then voided. The bladder was then distended with air.

Here it was noticed that the irregularity of the

surface was not well shown. This was doubtless due to the fact that in the present instance a better emulsion was employed than before. The thick silver solution did not enter the surface cracks, and consequently but little surface detail is discovered. More important, though, than showing the surface outline is the clear demonstration of the pedicle of the growth. Remembering the exaggeration of the size of objects in taking stereograms, the authors were able to estimate roughly the dimensions of both pedicle and tumor.

In their next case of this sort the authors propose to combine the methods of injection described, hoping to float up the tumor with the thick silver solution and display the pedicle, at the same time obtaining good surface detail by the use of a suspension of bismuth in water.

The authors have been using silver iodide emulsion in ureteral injections as well as in the bladder for X-ray purposes. They believe that it has certain decided advantages over collargol, and they have a number of unusually good photographs of the renal pelvis, ureter, and bladder taken by this method.

Mayo: Exclusion of the Bladder; an Operation of Necessity and Expediency. *Tr. Am. Surg. Ass., 1913, May.* By Surg., Gynec. & Obst.

To determine the best method of disposing of the secretion of the kidneys in individuals in whom it is necessary or expedient to exclude the bladder remains still one of the serious problems of surgery. To say, however, that the modern methods of operation in these cases expose the patient to greater danger from infection than is compensatory with the mitigation of his suffering considering the natural mortality of the disease is not consistent with the history of the patients or the records of the progress of surgery.

The patients under discussion may be grouped under three headings: (1) Those suffering from congenital anomalies of the bladder or urethra of a character not to permit restoration with controllable urine, or to free them from painful sequelæ. (2) Those in whom sections of the ureter are necessarily or accidentally injured or removed during abdominal, pelvic, or sacral operations. (3) Those in whom malignant disease of the urinary bladder is too extensive to permit removal by partial resection of the bladder with retentive function, and those in whom gross malignant or other disease of the bladder exists but in whom the loss of power of retention and control adds to their suffering.

Various surgeons have devised ingenious methods for making a bladder in the repair of cases in the first group. For example, (a) a bladder made of skin flaps, (b) the compression of the bony pelvis, (3) closing the bladder and covering it with an anterior bony arch by freeing the sacro-iliac joints, etc. Control in such cases is rare and cystitis and infection of the kidney is common.

In the second group are those cases in which the injured ureter cannot be reunited to itself or reat-

tached to the bladder, the injured ureter may be reunited with the other ureter if that be patent, or one or both ureters may be united to the colon. Direct drainage to the skin has been advised. These operations are done extraperitoneally, the urine being collected by special apparatus.

In the third group are cases of extensive involvement in which part or all of the bladder has been removed. In the former, the ureters are sometimes transplanted to the opposite remaining portion of the bladder; in the latter the ureters may be implanted into the rectum.

It would appear that the best theoretical and practical anastomosis of the ureter with the large bowel is that which either permits the ureters to traverse some distance between the mucosa and the outer wall of the bowel before penetrating its lumen or that in which the ureters are infolded by the wall of the bowel for a certain distance. That method which transposes the base of the bladder to make it a part of the rectal wall is also a good one. The control against regurgitation is due to the closure of the distal end by compression in the wall of the bowel.

In eight cases of cancer, transperitoneal resection of large areas of the bladder was done, with transplantation of the ureter to the opposite side. In three cases of cancer the bladder was completely removed: (1) Female aged 62: ureters transplanted into rectum; operative recovery; died some weeks later from cerebral hæmorrhage. (2) Female aged 20. The ureter was attached to the base of the urethra by the Sonnenberg method. The patient was in good health one year, when she died from acute infection of the kidney. (3) Male aged 50. The ureter was transplanted into the back—transperitoneally. The patient has been well for more than three years.

In four cases of extrophy the ureter was transplanted into the bowel; no deaths.

GENITAL ORGANS

James and Shuman: Seminal Calculi Simulating Nephrolithiasis. *Surg., Gynec. & Obst., 1913, xvi, 302.* By Surg., Gynec. & Obst.

That seminal calculi are a rare condition is evident on reviewing the literature. Fuller is quoted (personal communication), "stone in the seminal vesicles must be very rare," and relates having met this condition but twice.

Calculi in the seminal vesicles may present the definite clinical picture of renal stone: Irritation from seminal calculi can be transmitted to the respective kidney or lumbar region through: first, either the vesicle or prostatic filament of the inferior hypogastric or pelvic plexus to the hypogastric plexus, hence through the gangliated cord to the lumbar ganglia and either to the lumbar vertebræ and their ligaments (lumbago), or through the aortic plexus, aortic-renal ganglia and renal plexus to the kidney substance (nephralgia); second, can be transmitted through the deferentia plexus, via

short route to the gangliated cord; third, the efferent filaments of the deferentia plexus and the genito-crural nerve to the lumbar region; fourth, irritation may travel through the vas deferens filament of the pelvic sympathetic, the spermatic artery filament of the spermatic plexus and its numerous filaments to the renal or lumbar ganglia. Thus may be produced, by any one of the several routes, referred pain and tenderness.

A thorough investigation of this subject has failed to procure any operative or post-mortem proven cases to report other than the following:

Male, aged 33, suffered from apparent right renal colic as evidenced by severe right-sided pain, rectus rigidity, frequent micturition, pain referred to penis and marked pain on palpation of right kidney.

Urinary examination: Chemically, negative; microscopically, few erythrocytes, epithelium and phosphates. Case diagnosed as probably right renal calculi. Two days later the patient passed by urethra what he described as a "slug." Physical examination at the time revealed a tender right kidney on palpation. Labor, or forced exercise, excited pain in his right side. One month later, physical examination evidenced the same findings.

Blood examination: W. B. C., 7600 R. B. C., picture normal. Hemoglobin 80, blood pressure 110, Nephrotomy advised and accepted.

Under ether anæsthesia, through a lumbar incision, the right kidney was sectioned and no stone present. Ureter patulous. Incision closed and the kidney drained by a sutured cigarette drain. Convalescence uneventful until removal of drain on seventh day, following which urine became bloody, patient later passing vermiform clots from the bladder. General condition continued to grow worse, due to the acute hæmorrhagic anæmia and cystic tenesmus due to blood clots contained therein.

Death occurred five weeks after operation, clinically from acute anæmia due to hæmorrhage from the right kidney.

Autopsy revealed the following findings: Right kidney's pelvis filled with blood clots, one extending well up toward the cortex and continuous with an old patulous suture hole. Cortex evidenced an unhealed opening continuous with the superficial drainage tract. Left kidney, ureters, and prostates negative. Vas deferens evidenced no change.

Seminal vesicle walls hypertrophied. Four calculi removed from the right vesicle, situated near the fundus, dull white in color and faceted, ranging in size from that of a grain of popcorn to that of field corn. Seminal fluid stained out many gram negative diplococci.

Chemical analysis yielded phosphate and carbonate of lime of 85% organic matter, in which spermatozoa were found 15 per cent.

Pathological diagnosis:

1. Pernicious anæmia secondary to hæmorrhage.
2. Suppurative-hæmorrhagic nephritis of the right kidney.
3. Chronic seminal vesiculitis with calculi formation (dextra).
4. Chronic Neisserian infection.

Luys: Catheterization of the Ejaculatory Ducts
(Le catheterisme des canaux ejaculateurs). *Clinique*, Par., 1913, No. 7, 98.

By Journal de Chirurgie.

Luys has succeeded in catheterizing the ejaculatory duct and in healing a patient suffering from vesiculitis. The following is the first case reported in literature.

In August, 1912, the patient had a profuse discharge with a double epididymitis, prostatitis and left vesiculitis. He received permanganate irrigations, massage of the prostate and dilatations. In January, 1913, the left vesicle was still painful and could not be emptied by massage since the ejaculatory duct was blocked. By the use of urethroscope No. 26, the author was able to see the orifices of the ejaculatory ducts. He then introduced a metal catheter which penetrated easily for one and one-half centimeters into the left ejaculatory duct which was filled with oxycyngen. He then massaged the seminal vesicle and found that it was no longer painful. The massaging expressed large purulent masses which came out at the urethral meatus. It would seem clear from the above, says Luys, that the catheterization of the ejaculatory ducts should be considered in cases where there is obstruction to the lumen with imperfect evacuation of the seminal vesicles.

The author concludes by giving the indications for and the technique used in the catheterization, which requires a thorough knowledge of posterior urethroscopy.

E. JEANBRAU.

SURGERY OF THE EYE AND EAR

EYE

Ray: Scleral Decompression in the Treatment of Intra-ocular Tension. *Ky. M. J.*, 1913, xi, 149.
By Surg., Gynec. & Obst.

Ray gives an abbreviated résumé of the changes in all those conditions in which the intraocular tension is pathologically increased, and states that it is apparent that the essential object of treatment for the relief or cure of such cases is to open up the angle of filtration or establish some method whereby the drainage of the eye fluids can be obtained. Up to the present time, iridectomy has been the most effective intra- or extrabulbar operative measure for the relief of increased tension since MacKenzie made use of posterior sclerotomy over seventy years ago. The most lasting results following this procedure have been observed in those cases where a resulting cystoid cicatrix made a constant leakage possible. This observation led to the advice that a piece of iris be purposely carried into the incision in order to further insure the establishment of a leaking scar. Fragments of iris may heal into the wound with but little or no source of future danger, but the consolidation of such scars might be indefinitely interfered with, and thus render the eye vulnerable to bacterial infection along the spongy track. The latest advance in the treatment of glaucoma has been designed to bring about a permanent filtration scar through the sclera at the extreme boundary of the anterior chamber, without incarceration of iris in the wound. This idea was first suggested by Herbert, and made use of by placing a piece of conjunctiva or excised sclera between the lips of a corneo-scleral incision, so as to prevent complete union. Later Lagrange excised a strip of sclera after an incision made well back and then covered the opening with large conjunctival flap.

The author believes, however, that a new era in the treatment of glaucoma commenced when Fergus and Elliott, each working independently, introduced the scleral trephine. A large triangular flap of conjunctiva, with its base at the limbus, is dissected up and carried into the limbus corneæ; then a 2-millimeter trephine is used to remove a disc of scleral tissue at the corneo-scleral angle. Now that the extreme angle of the anterior chamber has been entered, a small iridectomy is made, the conjunctival flap is replaced over the scleral opening, and the subconjunctival leakage of aqueous takes place. This technique was followed in two cases of acute glaucoma with great pain and high tension, two cases of glaucoma simplex, and one case of hydrophthalmos, in all of which the tension was reduced to normal and not followed by a permanent rise since the operation.

The author concludes with the statement that "there is no question that the only glaucomatous operated eyes that are permanently benefited are those where some leakage of the eye fluid takes place," and that this desired end is most efficiently accomplished by scleral trephine. FRANCIS LANE.

Verhoeff: The Effect of Chronic Glaucoma on the Central Retinal Vessels. *Arch. Ophthalm.*, 1913, xlii, 145.
By Surg., Gynec. & Obst.

Verhoeff has made a careful microscopic study of serial cross-sections of the optic nerve, in the region of the lamina cribrosa, in thirty-nine cases of secondary glaucoma due to lesions of the anterior segment of the globe. Not thrombosis, but an endovascularitis of one or both of the central vessels, more often the vein, was found in every one of the cases. Age of the patient and duration of the increased pressure did not particularly bear a direct relationship to the degree of the vascular changes, but in general it could be concluded that these changes occurred the more rapidly the older the individual.

In four cases there was complete, and in two almost complete, obstruction of the central artery. One section is pictured in which the cells immediately about the lumen showed very active proliferation, with almost complete obliteration from an infolding. In other cases, probably where the process was more slow, elastic tissue with a tendency to undergo necrosis was seen to almost completely block the lumen. As a result of the degeneration an inner tube was often found to be completely separated off by a space filled with blood, thus forming a "dissecting aneurism."

The changes in the veins, subject to variation, were analogous to those in the arteries. In most instances the walls were unevenly involved and partially collapsed into the lumen. Complete obstruction of the vein was found in eight cases, three of which showed retinal hæmorrhages, importance of which warranted a detailed description. Bundles of neuroglia encroaching upon the walls of four veins was a hitherto unrecognized condition which might easily have been mistaken for actively proliferated endothelial cells. A dissecting aneurism of one vein, showing a branch entering the surrounding space, was another unusual finding.

Expulsive subchoroidal hæmorrhage had occurred in four cases, with almost complete obstruction of the vein in one and of the artery in two.

Three factors must be considered to account for these vessel changes in secondary glaucoma. First and foremost, "the direct action of the increased intra-ocular pressure on the central vascular system,

the action on the central vessels of toxic substances resulting from the relative stagnation of the intra-ocular fluids, and, lastly, the traction on the vessels produced by the receding lamina cribrosa."

In view of the fact that complete or almost complete obliteration of the central vein was found in a little less than one half of the author's cases, it is remarkable how infrequently retinal hæmorrhages occurred, and the ingenious explanation for the absence of such an expected condition is made on the ground that the artery is so often simultaneously involved, and that the slowness of the process allows adequate collateral circulation in the optic nerve.

J. B. ELLIS.

Ritchie: The Management of Acute Hæmorrhagic Glaucoma with Advanced Arteriosclerosis. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 96.
By Surg., Gynec. & Obst.

In this article the importance of the pathology of the disease as a whole is brought out with a discussion of the treatment of the systemic condition and the local manifestations in the eye.

It is generally accepted by recent authorities that the cause of angiosclerosis is the action of toxins, the product of intestinal putrefaction due to faulty metabolism, on the tissues of the circulatory and nervous systems.

It is necessary to differentiate between hæmorrhagic glaucoma and hæmorrhages that occur in an eye which is already the seat of a glaucomatous process, although they are both the result of the same cause.

The general constitutional treatment is essential. Hygienic conditions must be carefully looked after. Diet of a low protein character suitable for this condition should be adhered to. The urine should be examined regularly for indications of intestinal toxæmia. Tepid baths with the addition of soda bicarbonate are of benefit. Electro-therapy is of great value as are electric light sweats.

Medicinally the author follows the homœopathic indications but speaks of the value of sodium iodide, the alkaloid veratrin and the Bulgarian lactic acid bacilli (tablet form).

In the treatment of the ocular condition there is some difference of opinion as to the advisability of operative treatment but the author believes that the operations can be performed safely under local anæsthetic (1 per cent solution of cocaine in combination with some of the essential oils, and supracapsolin 1:1000). The technique is such in any of the operations that if great care is taken the tension can be reduced very gradually.

EARLE B. FOWLER.

Denman: The Surgical Treatment of Glaucoma with Special Reference to the Substitutes for Iridectomy. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 105.
By Surg., Gynec. & Obst.

The author takes up the history and reasons for the important position that iridectomy has held

among the operative measures for the treatment of glaucoma, with the theories for its action, a list of the more recent operative procedures and the technique of trephine, sclerectomy, and cyclodialysis.

The results of iridectomy have been attributed to the part the stump of the iris plays in absorption and by widening of the filtration angle. It must be classed always as a major operation and as such it is to be excused if followed by such sequelæ as astigmatism, and coloboma with their visual disturbances. The operation which will accomplish the reduction of the tension in the surest and safest manner with the least resulting deformity and leave the eye in the most nearly normal state is the one which we should choose.

In trephine a circle of scleral tissue about 2 mm. in diameter is removed in the region of the limbus and the aqueous drains through the aperture under the conjunctiva. This may be done with or without peripheral or pupillary iridectomy.

In performing cyclodialysis care must be taken in the selection of the location of the incision so that the larger blood vessels may be avoided; the spatula must be advanced with the point pressed firmly but gently against the sclera or it may perforate the root of the iris and enter the anterior chamber but when withdrawn will not leave a drain as the puncture in the iris quickly heals. Too great pressure forward may cause the point to enter the corneal stroma so that the anterior chamber is not drained. Properly performed the eye does not show any evidence of having been operated on; there are no visual disturbances; there is a round normal pupil which is still susceptible to the influence of mydriatics and myotics.

EARLE B. FOWLER.

Parker: The Trephine Operation for Glaucoma, with Exhibition of Patients. *Phys. & Surg.*, 1913, xxxv, 103.
By Surg., Gynec. & Obst.

Parker reports two cases of glaucoma on which he did a trephining operation, one case being in a patient seventy years old with simple glaucoma. R. V. 3/60, tension 75 mm. L. V. light perception, tension 105 mm. Iridectomy done on right eye, trephining operation on left eye. Tension normal in both eyes seventeen weeks later, although tension increased to 50 mm. at one time after operation.

Case 2, was a child three years old with buphthalmus tension. Right and left eye 48 mm. Results of operation not known as yet.

C. G. DARLING.

Johnson: Some Points in the History and Pathology of Trachoma and a New Treatment for Chronic Trachoma. *Transvaal M. J.*, 1913, viii, 174.
By Surg., Gynec. & Obst.

Johnson discusses the history of trachoma, the effect of elevation on the disease, its characteristic features, its causes and the treatment of chronic trachoma.

In the treatment he says he has tried every method of treatment during an extensive experience of twenty-five years, and believes the method used by

him gives the best results. He uses a three-bladed knife, the blades being one mm. apart, the knives being as sharp as a cataract knife.

When the mucosa is very swollen the cuts must be as deep as possible; the knife is drawn from canthus following the free edge of the lid; the incisions are all made parallel to the lid margin. In each successive cut the first blade follows the cut made by the third blade. The parallel incisions through conjunctiva and tarsus are continued back into the retro-arsal fold by pulling it out with hooks over a spatula. An electrode with two dull platinum blades is now pressed deeply into the grooves made with the knife and drawn slowly along the furrows from end to end.

The current is very weak at first and increased until a thick foamy cream forms around the blades. The blades are drawn back and forth five or six times until the grooves brown like toast.

The first stage of the operation takes about five minutes, the second stage about ten. Johnson says he has never seen any severe scarring or abnormal curvature of the lid as a result. C. G. DARLING.

La Mothe: Infectious Suppurative Keratitis.
Ophthalm. Rec., 1913, xxii, 117. By Surg., Gynec. & Obst.

La Mothe, basing his opinion upon a few personal observations and on published facts, comes to the following conclusions: There should be a new classification of the infectious ulcer of the cornea, depending on the microbe present, and a different treatment should be applied for every kind of corneal infection, especially since serotherapy has taken so much importance in microbial diseases.

Bacteriological observations of competent investigators, corroborated by experimental pathology, have abundantly proven that a great number of microbial organisms can and do intervene in the pathogeny of infectious ulcer.

La Mothe, in a very complete study, brings up to date a subject which has been neglected for too long a time. First, he takes the history of the corneal ulcer with its principal different forms; second, he tells of the efforts of doctors who for several years have tried to find a better means for controlling the disease; and lastly, he is of the opinion that the serotherapy is the most rational and is the treatment of the future for the infectious ulcer of the cornea, but as yet the serotherapy is in its infancy, so we must be satisfied with the old means the therapy puts at our disposal aided by the serotherapy. J. B. ELLIS

Posey: The Report of a Case of Conical Cornea Successfully Treated by the Actual Cautery.
Arch. Ophthalm., 1913, xlii, 141. By Surg., Gynec. & Obst.

Posey cauterized thoroughly the base and but slightly the apex of a conical cornea with most excellent results. Prior to the cauterization the vision was 3/100 and no lens afforded an improvement. The red-hot tip of a large strabismus hook was employed as the cauterizing instrument, and

while healing was protracted it was uneventful. After a lapse of seven months the uncorrected vision was 5/22 and Sn. 0.75, but with a correction for mixed astigmatism equaled 5/7— and Sn. 0.50. The area cauterized was sector-shaped and occupied but one-sixth the entire surface of the cornea. Fully one-half the pupillary area was free from scar tissue and while the edge of the opacity was dense, it was, however, sharply defined without the expected disturbance of vision through aberrant refraction. At this period the vision of the other eye had fallen from 5/12 to less than 5/100, and was accordingly subjected to precisely the same operation. At the time of writing the result was equally as good as in the first eye, although no opportunity had been afforded to test the vision with a correcting lens.

In most cases the vision can be improved by high cylindrical lenses, but in many the distortion of the cornea is so great that lenses are useless.

Surgical measures for the relief of advanced cases have aimed (1) to create an artificial pupil; (2) to flatten the conicity either by excision of circular or elliptical areas of cornea, with or without cauterization, and (3) to produce flattening by cauterization alone. Most operators favor the latter procedure, preferring the galvano-cautery, and varying in their methods as to extent and thoroughness of the application.

The author aims to replace the greater part of the cone with firm connective tissue, "which should be so placed that the traction exerted by the scar in the process of healing is sufficient to resist the intra-ocular pressure, while its density should be great enough to prevent rays of light from penetrating it, thereby reducing aberrant refraction."

A firm compress bandage after operation is essential, and tattooing is optional for cosmetic effect.

JOHN B. ELLIS.

Reese: Dystrophia Epithelialis Corneæ. *Ophthalm. Rec.*, 1913, xxii, 131. By Surg., Gynec. & Obst.

This condition was first described by Fuchs in 1910. Fuchs stated that affections of the cornea were generally divided into suppurative and non-suppurative, and that there was an intermediate group which should be regarded as dystrophies of the cornea.

The latter was distinguished from inflammatory conditions by a slow and invariably progressive course, while the inflammatory diseases were marked by a period of progression followed by a period of regression.

Differential diagnosis: Absence of inflammatory signs was not a positive differential point, as they may be absent in true inflammatory lesions, e. g., parenchymatous keratitis. Anatomically: characterized by degenerative changes; inflammatory lesions by leucocytic invasion. Physiological parallel: Arcus senilis, e. g., deposit of fat and hyaline degeneration.

The cause of dystrophy in the majority of cases was due to malnutrition.

Three forms due to general malnutrition:

1. Deposits of mucin and occurring, in myxœdematous subjects.
2. Thyroidectomy.
3. The greenish discoloration of the cornea occurring in disseminate sclerosis.

He said that epithelialis cornea was a disease of advanced age, and affects usually the female sex. (Youngest on record 43 years.) Usually bilateral, and when unilateral generally affected the right eye.

Onset insidious, visual disturbances having existed for years before the cases were brought under observation.

Symptoms: They were marked by absence of any irritation (except in two cases out of seventeen, e. g., slight pericorneal injection).

Insensibility of cornea and variations in vision. Vision worse in the morning, in contrast to glaucoma. No variations in pressure.

The changes were characterized by a grayish opacity and roughening of the surface of the cornea, caused by small vacuoles in the epithelial cells and newly formed tissue between Bowman's membrane and the epithelium.

The anæsthesia of the cornea was due to the injury of the superficial nerve fibres of the epithelium, or of the subepithelial nerve plexus, or the fibres connecting the two which pass through Bowman's membrane. N. M. BRINKERHOFF.

Hack: A Case of Eversion of the Pigment Layer of the Iris. *Arch. Ophthalm.*, 1913, xlii, 170.

By Surg., Gynec. & Obst.

Hack calls attention to a survey of all the radiating fissures of the pupillary zone of the iris following contusions. Mention is made of Franke's publication, which first dealt with the extent of such tears, the complications to deeper structures and the mechanics dealing with such injuries.

The unusual, isolated traumatic ruptures and colobomas limited to the pigment epithelium of the iris alone are recalled, and, owing to its somewhat analogous nature, the writer reports a most unusual and rare eversion of the pigment layer of the iris following a perforation. Fifteen years previously the cornea had been perforated with a blade of straw which also penetrated the iris stroma and sphincter pupillæ. The pigment layer was separated from the overlying structure, and on account of its inelasticity a thread of pigment became stripped off, except at the pupillary margin, was then everted through the pupil and hung down to the bottom of the anterior chamber.

Sach's lamp is recommended to demonstrate certain injuries to and absence of the retinal pigment on the posterior surface of the iris. FRANCIS LANE.

Critchett: Case Showing the Result of Peritomy.

Proc. Roy. Soc. Med., 1913, vi, 61.

By Surg., Gynec. & Obst.

Critchett employed peritomy with most gratifying results in a case of long standing, recurrent

"kerato-iritis," in which numerous deep corneal vessels constituted a very striking feature. Sufficient tissue down to the sclerotic was removed, with the result that a tightening band of cicatricial tissue crossed the vessels. This same procedure was proven beneficial also in recurrent corneal ulcers without obvious cause.

FRANCIS LANE.

Alter: Metastatic Purulent Ophthalmia (Endophthalmitis Septica). *Ohio St. M. J.*, 1913, 123, ix.

By Surg., Gynec. & Obst.

Alter reports a case of purulent ophthalmia of puerperal origin in one eye a week after a normal labor. The eye became red, painful, lids œdematous, vision entirely abolished.

On account of the intense pain, the globe was incised under local anæsthesia and later enucleated. Pus from the center of globe showed staphylococci and streptococci. The patient otherwise made perfect recovery.

In conclusion and as a summary, Alter states when metastatic ophthalmia is bilateral, probably 90 per cent of the cases die from underlying sepsis. Unilateral cases give better general prognosis, although the eye is usually lost. The rare cases of preservation of some vision are found in acute exanthemata and especially in epidemic cerebrospinal meningitis.

The streptococcus is the most frequent and serious offending micro-organism. Better and cleaner obstetrics, and more rigid asepsis in surgery will help to eliminate metastatic ophthalmia.

C. G. DARLING.

Gruening: The Optic Discs in Purulent Otitic Disease and its Complications. *Arch. Ophthalm.*, 1913, xlii, 153.

By Surg., Gynec. & Obst.

Gruening believes that an examination of the fundus is too lightly regarded in all cases of acute and chronic suppurative middle-ear disorders. In support of this view, reference is made to Kipp and Zaufol, both of whom over thirty years ago considered that the examination of a diseased ear was incomplete without the ophthalmoscopic findings.

Optic neuritis and choked disc are two pathologic conditions which can complicate purulent otitic affections and their exact differentiation has an important bearing upon the diagnosis, prognosis and treatment. Choked disc is the ophthalmoscopic manifestation of increased intracranial pressure and its early recognition is of great value because of the fact that the fundamental source is amenable to treatment. In purulent middle-ear affection the pyogenic organisms have a wide sphere of action, and by the diffusion of the toxins changes take place in the walls of distant vessels, resulting in an excess of cerebro-spinal fluid, by virtue of which an increase of intracranial pressure arises with choked disc as the outcome.

Local structural conditions possibly cause a variation of the hydrostatic pressure and lead to a difference of the degree of swelling of the two discs. Recognizing this fact in a given case of double

mastoiditis with symptoms of thrombosis of one or the other lateral sinus, or both, the author verified by operation that he was correct in assuming that the sinus involved was on the same side, presenting the highest degree of swelling of the nerve head. That "choked disc," in cases of purulent middle-ear trouble, is not a true descending neuritis is confirmed by the final restoration of normal function of the optic nerve. True inflammation of the optic nerve does occur in acute purulent meningitis following otitic causes and although an increase of intracranial pressure may be present at the same time, choked disc does not appear because the intervaginal space is early sealed up by an inflammatory exudate.

JOHN B. ELLIS.

EAR

Nelson: A Suggestion on Phenol and Ichthylol in External Otitis. *J. Am. M. Ass.*, 1913, lx, 742.
By Surg., Gynec. & Obst.

A mixture containing 5 per cent each phenol and ichthylol in glycerine was found efficacious in otitis externa diffusa, myringitis, otitis externa circumscripta, and in connection with other treatment as good as any ear drops in acute otitis media; and especially good in otitis externa caused by chronic otitis media.

The author finds this a valuable addition to existing methods of treatment, having given it a thorough trial on a series of clinic cases. WM. H. THEOBOLD.

Brown: A Contribution to the Infant Temporal Bone in its Relation to the Mastoid Operation. *Bull. Lying-in Hosp.* 1913, ix, 11.

By Surg., Gynec. & Obst.

The author gives an explanation for the fact that on opening the tympanum the middle ear is so well drained of inflammatory product in acute otitis media in infants. It is due to the antrum being located immediately above the tympanum and the aditus being a perpendicular channel connecting these two cavities. Any pus naturally gravitates into the tympanum and on rupture or incision these inflammatory products leave the antrum with little difficulty. The sinus is situated comparatively far posterior to Macewen's line drawn from the incisura parietalis to the tip of the mastoid. In describing the differences in the technique of the mastoid operation in children from the operation in the adult, the author places the incision not nearer than a quarter of an inch from the auricular attachment, in order to avoid injuring the facial nerve which lies on the very surface of the bone behind the lower half of the posterior canal wall. Penetration into the middle fossa with injury to the brain is possible if the periosteum is not elevated with great care. In children under five years, it is advisable that the operator not very well acquainted with mastoid work in young children use the curette rather than the gauge in removing the outer bony covering. This procedure is also safer regarding the position

of the facial nerve and the sinus lying within three and one half mm. from the surface of the bone. On opening the antrum the incus will be seen almost filling the aditus. In removing the mastoid structure one has to be careful not to injure the posterior semicircular canal which lies immediately behind the horizontal canal. The author's description of the technique of the mastoid operation is based upon the anatomical studies of Freligh. EMIL SCHWARZ.

Ballin: Tibial Bone Transplantation in the Post-operative Mastoid Wound. *Med. Rec.*, 1913, lxxxiii, 372.
By Surg., Gynec. & Obst.

In order to hasten the early or primary closure of the mastoid wound, to avoid the packing and re-packing, and to obtain a better result cosmetically, various methods have been suggested from time to time.

The writer having been interested for some time in bone transplantation and having observed the splendid results obtained by the general surgeon by this method of treatment, he conceived the idea that the same procedure might be applicable to the vascular mastoid bone. He did not know at the time whether transplantation of bone would be feasible here, but thought he would give it a trial when the opportunity presented itself.

He was intensely gratified to see this belief substantiated by most excellent results in the three cases reported by him, the histories of which are fully detailed.

The technique of bone transplantation as employed by the writer is as follows: The piece of bone which he uses for the transplant is taken from the crest of the patient's tibia. As a matter of convenience he selects the leg corresponding to the side of the mastoid wound. The operation is performed under general anæsthesia, although it is perfectly feasible under a local anæsthetic.

Having removed the packing from the mastoid cavity he freshens the edges so as to obtain a better union, but does not touch the granulating surface of the wound itself. In the meantime an assistant prepares the leg over the tibial region. He then makes an incision 6 or 7 inches in length down to the periosteum, but exercises care not to injure it.

With a bent probe he now measures the distance from the upper to the lower angle of the mastoid wound and marks off the corresponding length on the exposed periosteum. He then outlines with a sharp scalpel the piece of bone he wishes to remove, cutting through the periosteum to the bone itself, but being careful not to cause any injury. He usually outlines a quadrangular bone flap, from half an inch to one inch in width, the length varying according to the mastoid wound.

Having done this, he bores a small hole with a bone drill through the crest of the tibia, about half an inch below the surface. Through this he passes a small Gigli saw.

This is fastened into the handle of a scroll saw and one then removes a bone flap so that the raw

edges are somewhat beveled. He finds it better to use a saw than a chisel for this purpose, as there is less possibility of injuring the periosteum, and if one follows this little precaution of first drilling a small hole the saw cannot slip.

The bone with its periosteum now being detached, it is carefully immersed with a pair of forceps into warm saline solution. It is thereupon placed into the mastoid wound as quickly as possible in such a manner that its raw surfaces come in contact with the clean granulating surfaces of the mastoid bone itself. The skin is then carefully sutured with the exception of a small orifice in the lower angle, in which he places a small piece of gutta-percha drain for a few days.

If at the end of three or four days he finds that there is merely a slight mucous or mucohæmorrhagic discharge, he removes the drain and allows the opening to close entirely.

The transplanted bone acts as a bridge, and upon this rests the skin of the mastoid region. From the transplanted living periosteum new osteogenetic cells penetrate into the transplanted bone and gradually replace it by newly formed bone, while union between the transplanted periosteum and the periosteum of the adjacent bony tissue also takes place.

The air space below the transplant fills up with a blood clot, which becomes organized and eventually replaced by new bone from the transplant, so that after a time the cavity becomes obliterated.

It is important to remember that even in cases in which the bone transplant is exfoliated, portions or the entire transplanted periosteum remains. It eventually produces a new bone formation, which fills the defect created by the operation.

In performing bone transplantation the author advises the following precautions:

(1) The post-operative mastoid wound must be free from purulent secretion and covered with healthy granulations.

(2) The wound must not be curetted or bathed with antiseptic solutions.

(3) Transplantation must be performed as a

secondary operation, and may be undertaken a week, ten days, or even longer after the primary operation, depending entirely on the condition of the mastoid cavity.

(4) The bone flap must be taken from the patient's own tibia; in other words, an autogenous transplantation.

(5) Bone alone is insufficient; one must always take the bone with its living periosteum attached. This has been conclusively demonstrated by the experiments of Ollier as early as 1858, and confirmed later by Radzimowsky, Marchand, Bonome, and others, and more recently by Auxhausen. The consensus of opinion of most investigators proves that in order to make a bone transplant viable it is imperative to preserve the healthy living periosteum.

(6) The periosteum must not be injured; for, if it is, the ultimate result will be doubtful. The chances of success are much greater with an uninjured periosteum.

(7) In making the bone flap, one must handle it as little as possible, so as to avoid injury and infection.

(8) Inasmuch as a good blood supply is absolutely essential to the successful issue of all kinds of transplantation it is advisable to make use of this method only in such cases in which a good vascular bed for the transplant is present. This would exclude those cases in which there is a hard, ebonized sclerotic mastoid bone.

Transplantation of the bone in mastoid surgery is a procedure which the author does not advocate as a routine measure. He is of the opinion, however, that it is of value in cases in which there is a clean granulating wound.

In conclusion the author states that a few cases are indeed insufficient to prove the value of any surgical procedure. However, he feels that the encouraging results obtained by these first attempts at a solid bone graft in a mastoid wound, and as far as he knows the first attempts of this kind, demonstrate the feasibility of this method, and trusts that future cases will prove it of value in the post-operative treatment of mastoid wounds.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Ross: Nerve Supply of Inferior Turbinal as Shown by Vital Staining. *J. Laryngol., Rhinol. & Otol.*, 1913, xxviii, 57. By Surg., Gynec. & Obst.

This is an account of the nerve structures in the inferior turbinal, founded on an examination of twenty-five specimens removed by operation and stained by the intravital methylene-blue method. The author outlines the method of staining and describes the appearance of the various structures in the section stained.

The nerve supply of the inferior turbinal comes from the two inferior nasal nerves which are given off by the anterior palatine. The stain shows that the nerves enter posteriorly and run forward near the bone, usually in association with the artery and vein. Branches, generally very tortuous, run to the surface from these trunks.

There are three types of fibres made out by this method. From these, fibres are given off as follows: (1) Fibers to the blood spaces and non-stripped muscular tissue surrounding the blood vessels and glands. (2) Fibers ending in the sub-epithelial layer. These are found with at least five types of endings. (3) Fibers ending in the epithelial layer, fairly equal in distribution, ending in the sub-epithelial layer or piercing the basement membrane and ending between this and the ciliary epithelium in a small bulb with a fine stalk. None of the endings come in direct contact with the cells of the columnar epithelium.

EARLE B. FOWLER.

Ingals: An Efficient and Easily Removable Nasal Packing. *Illinois M. J.*, 1913, xxiii, 249. By Surg., Gynec. & Obst.

In this original article, Ingals advocates packing after most nasal operations to prevent the loss even of small quantities of blood as well as to avoid the dangers of severe bleeding. Packing is also necessary in some cases to hold the parts in place.

Ingals' method of packing is by the use of a rubber sponge. A piece 4 cm. thick by 5 to 8 cm. long, or about 2 mm. greater in thickness than the extreme width of the shrunken nares. After the sponge has been fashioned to fit the nares, a strong linen thread is passed through from above downward, 1.5 cm. back of its proximal end and its ends tied in a loop 4 cm. long by which the sponge may be withdrawn. A second thread is sewed through and through and tied in front of the vertical thread, thereby preventing tearing apart on removal. A strong thread may be passed through the sponge 4 cm. in front of its posterior end, fastened to the posterior end, then carried forward through the opposite side, and united with the first end to form a loop. Pulling on this loop after the packing is

inserted will double the back end of the sponge on itself and pack the choana very tightly. The packing is sterilized in formalin (being compressed and allowed to expand alternately causing the solution to permeate every part), and is then thoroughly washed in sterile water.

The author gives a few whiffs of chloroform to remove the pack. When hæmorrhage is feared, a powder of quinine-urea hydrochlorate (1 part), acid gallic (1 part), acid tannic (3 parts), may be rubbed on the pack where it will come in contact with the wound.

EARLE B. FOWLER.

Carter: A Case Showing Restoration of the Entire Nose by Rhinoplasty and Bone Transplantation. *J. Am. M. Ass.*, 1913, lx, 728.

By Surg., Gynec. & Obst.

The patient, a woman 32 years of age, had had a chancre of the nose 16 years previously, followed in several months by a necrosis leaving only a hole in the face where the nose should have been, surrounded by a ring of scar tissue extending onto the cheeks. The upper lip was left badly scarred and retracted. Part of the hard palate and maxilla, the septum and the entire contents of the nasal cavity were destroyed. General condition of the patient at the time of examination was only fair.

A three-inch piece of the ninth rib was resected; this was split and the cancellous tissue of the outer one-half was scraped away. It was then transplanted between the superficial and deep fascia over the biceps of the left arm. Ten days later a flap was dissected up including the bone graft, with the lower part remaining attached to arm. The upper end of the flap was sutured into the proper position on the face and the end of the bone graft placed under the periosteum over the nasofrontal process. The arm was bandaged to the head by means of plaster strips. On the third day epithelial skin grafts from the thigh were placed on the under side of the flap. On the twenty-second day the connection with the arm was severed. As the death of the flap seemed imminent a leech was applied to the distal end and this caused a strong flow of blood through the capillaries, dilating them and securing a good blood supply for the flap. The molding of the flap into a nose required several minor operations. There is an opening for nasal breathing, sensation is developing in the nose, and appearance is greatly improved. EARLE B. FOWLER.

McWilliams: Rhinoplasty. *J. Am. M. Ass.*, 1913, lx, 730. By Surg., Gynec. & Obst.

The author reports a case representing the severest type of external nasal deformities in which

not only the soft parts, but also the bony structures, were wanting and had to be supplied.

The patient, a man of 45 years, had his nose amputated two years previously by the flywheel of an engine. Following this accident, eleven operations were performed to correct the condition. The projection of the nose was completely gone and the face surrounding was marred by numerous scars.

A plaster bandage was applied to the head and shoulders preceding the operation. The edges of the defect were pared all about the margin of the defect. The left ring finger was chosen; the nail removed and scraped, exposing bone beneath. Metacarpophalangeal articulation opened by a posterior longitudinal incision. The posterior extensor tendon was divided by transverse incision. The head of the metacarpal bone was removed. The anterior tendons were divided, also lateral ligaments of the joint. The finger was then free, but united by soft parts and nourished by uninjured digital vessels. The skin was removed from the whole circumference of the last phalanx, and the tip of the phalanx nipped off. The finger was then slipped into place, the extremity of the last phalanx going up to the frontal bone under a bridge of undivided soft parts. A longitudinal denudation on each side was attached to adjacent tissues.

On the fifteenth day, one of the digital vessels was tied and on the twenty-first day the finger was amputated at the metacarpophalangeal articulation. Later the first phalanx was flexed at right angles and the tip sutured to the bone behind.

The patient's appearance was much improved. There is a small opening into the nasal cavity. Photographs and a skiagram with the article show the steps of the operation and the result very clearly.

EARLE B. FOWLER.

Harmer: Exhibition of Specimens from a Case of Suppuration of the Antrum due to Aspergillus Fumigatus, with a Short Note of the Case. *Proc. Roy. Soc. Med.*, 1913, vi, 91.

By Surg., Gynec. & Obst.

(1) Three tubes showing secretion at different stages. (2) The growth on maltose agar. (3) Films showing mucelium. (4) Films showing spore formation. (5) Photographs.

The patient, a sufferer from hay fever, had had a persistent discharge of mucus from the right side of the nose for five weeks, following a severe cold that came on after motoring in an open car. There were brownish yellow casts, not offensive, violent attacks of sneezing, but no bleeding. The right side of the nose was occluded with an oedematous swelling and the antrum on the same side was dull. The general health was bad though the pulse and temperature were normal. The antrum was punctured through the nose and washed out twice a day for a month dislodging quantities of mucus and occasionally a piece of membrane with gritty fragments like bits of shell. The solutions used included salt, potassium permanganate, peroxide of hydrogen,

Tr. iodine, 75 per cent alcohol, and a suspension of bismuth subnitrate in oil. No improvement resulted. Sodium iodide in rapidly increasing doses was given internally, and, in spite of the fact that it caused some irritation, peroxide of hydrogen, five volume strength, was used to wash out the antrum as often as possible. After forty-eight hours a great quantity of membrane came away from which time the condition cleared up.

From the secretions there was a growth of *aspergillus fumigatus* on blood agar, mycelium were demonstrated on the unstained films, and it was found to grow best on Sabouraud's maltose-agar. Unlike the common moulds it will grow at body temperature as well as in the cold.

DAVIS spoke of a case in which the antrum was filled with polypi and these were invaded by a fungoid growth.

PEGLER said that he had met with this fungus in the external auditory canal. It formed a soft mass varying in color from white to black, causing much pain and perforating the drum membrane.

BRONNER said that it was fairly common in the external auditory meatus.

WAGGETT reported a case in which, five months after a successful radical operation on the maxillary antrum, the antrum became filled with a dark green, firm, leathery mass, which proved to consist of mycelium and hyphæ of a fungus.

EARLE B. FOWLER.

Reilly: Adenoids. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 117.

By Surg., Gynec. & Obst.

Very little has been done along the line of treatment of adenoids except to operate.

Little has been done toward the differentiation of pathological from physiological conditions of this tissue, and many eminent authorities have made it a routine practice to operate whether there were any symptoms to justify operation or not.

In a report of 4000 cases with regard to the general health of the patient, 5 per cent were reported as in very bad health, 65 per cent were in average health and 30 per cent were in splendid health. Yet, because there was hypertrophy of this tissue, it was removed in every case.

Standing, as it does, at the very last portal to the respiratory organs and composed of lymphatics and muciparous glands, with an excess of leucocytes, it would not seem an overdrawn theory to assume that this tissue has, at least in some small measure, the function of a guardian against the introduction of objectionable foreign material into the lungs.

The question which naturally arises is, What constitutes a pathological condition?

Is it necessary to operate on every case of adenoid hypertrophy, or only those cases in which there is enough hypertrophy to interfere with the respiration through the nose.

And again, with the admission from practically all authorities that a very large number of these cases recur, it would appear that operation, per se,

is not a cure, but only a part of the necessary treatment, and that it is quite necessary to attend to the local condition of the postnasal space until all the catarrhal symptoms are gone.

Of course we can account for the "adenoid facies," mouth breathing, and sluggish mentality of these patients on the ground of interference with the lymphatic circulation in the brain, but we cannot always connect the general symptoms found in many of these cases with the postnasal obstruction.

The condition of the general system is as much a matter for consideration in these cases as the local condition in the naso-pharynx.

The permanency of the cure depends as much upon our ability to build up the general health, and the constitutional resistance to pathological invasion, as it does upon the removal of the local obstruction.

Contrary to the general report we have found a tubercular family history in 75 per cent of the cases of pronounced adenoid hypertrophy.

The most valuable local treatment in these cases has been the application of adrenalin chloride 1-1000 through the nose. In this way, we get the action of the remedy upon the turbinates as well as the postnasal space.

In the milder cases where there was a very positive objection to operative procedure we have seen a number of cases do very nicely upon this treatment alone.

The frequency of involvement of the eustachian tubes makes it imperative that they be opened and kept open until they will stay open of themselves.

Jackson: Decannulation and Extubation after Tracheotomy and Intubation Respectively.

Tr. Am. Laryngol. Ass., 1913, May.

By Surg., Gynec. & Obst.

Jackson classifies the different forms of laryngeal stenosis associated with difficult decannulation and extubation into the following types: panic, spasmodic, paralytic, ankylotic (arytenoid), neoplastic, hyperplastic, cicatricial. Of the cicatricial type, there are three subclasses: (a) with loss of cartilage, (b) loss of muscular tissue, (c) fibrous type. To prevent panic, which is, in his experience, largely associated with "nerve cell habit" arising from previous terrorizing asphyxias, he advises corking the canula, with a rubber cork, without the patient's knowledge until the patient has become reaccustomed to breathing through the mouth, one factor in panic being that breathing through the "short cut" in the neck is so much easier than through the mouth, even in the absence of stenosis. The spasmodic types are often dependent upon lesions which require treatment. Paralytic and ankylotic cases are not much helped by simple cordectomy, but evisceration of the entire larynx down to the perichondrium, beginning just anterior to the arytenoids, which must not be damaged, the author has found to yield excellent results, though not so good as to voice as in cases where there is arytenoid mobility.

The removal of benign growths usually permits immediate decannulation of the patient. In papillomata, however, which are prone to recur, it is necessary to watch the larynx and remove recurrences before they become stenotic. Removals and applications of alcohol in the intervals eventually establishes a fibrous condition of the mucosa which makes a poor soil on which papillomata will not grow. Compression stenoses, peritracheal neoplasms, and hypertrophies of the thymus and thyroid glands are to be decannulated by external operations, thymopexy, thymectomy, thyroidectomy, etc., the stenosis being relieved in the meantime by a long tracheal canula. In organic conditions outside of the paralytic and neoplastic forms, it is the result of inflammation and especially of the mixed infections following specific infections such as lues, tuberculosis, diphtheria, typhoid fever, etc., that produce the inflammatory deposits and cicatrices. For these the author recommends endolaryngeal operations with forceps and knife by the direct method, and in such a way as to favor the formation of an adventitious vocal cord. The author emphasizes his opinion that if the arytenoid cartilage and joint are not injured either by the original process or by the operation, the movement will pull out a cicatricial band and thus produce the new cord. In some instances, prolonged intubation has been used, and in a few instances the operation of laryngostomy must be finally resorted to, keeping the larynx and trachea an open trough for many months until the cavity is lined with epidermal epithelium, after which a plastic operation is done to close the wound. In post-diphtheritic cases, associated with hypertrophy above the intubation tube, the author recommends forceps removal of the hypertrophic tissue by the direct method. For subglottic hypertrophies, he has had excellent success with vertical linear cauterizations, using a guarded cautery knife to avoid singeing the opposite hypertrophies. When one side is healed, the other is cauterized. This method has resulted in a cure in practically every case. The author reports twelve cases, all of which were permanently cured except one, which is still under treatment, the period of treatment ranging from one week to four years. The author comes to the following conclusions:

1. The development of the direct method compels us to revise our opinions. A large proportion of the cases of laryngeal stenosis can now be handled endolaryngeally.

2. After all else has failed to decannulate, laryngostomy should be resorted to. It will cure practically every case, but the treatment may in some instances extend over five or six years. Many cases can be cured in from three to six months.

3. The cases in which laryngostomy has failed are those in which the cartilaginous box of the larynx, or the subjacent rings, have been destroyed by necrosis. No stiffening is left to resist contraction. In such cases, if the loss of cartilage is great, laryngostomy is contra-indicated.

4. Laryngostomy is also contra-indicated in cases of incurable general disease, such as advanced tuberculosis, tabes, disseminated sclerosis, nephritis, malignancy, etc.

5. General anæsthesia has been the cause of more deaths in the handling of laryngeal stenosis than any other one thing, it is the author's opinion that a general anæsthetic is absolutely unjustifiable in any laryngeal case associated with even the slightest degree of stenosis, unless a tracheotomy has been done and it is absolutely certain that the tube is perfectly free and clear without granulations at the lower end. Further, Jackson believes that a general anæsthetic is unnecessary. In going over the literature of these cases, and also personal communication, the author is simply appalled at the enormous number of cases of death on the table from an attempt to give a general anæsthetic in cases of laryngeal stenosis. If the operator feels that he must have a general anæsthetic, the intratracheal insufflation of ether by the Elsberg method, either through the tracheotomy wound or through the mouth, is safe. Care must be exercised to see that there is ample space for the return flow.

Badgrow: Congenital Membrane of the Larynx.

Proc. Roy. Soc. Med., 1913, vi, 66.

By Surg., Gynec. & Obst

Examination of the patient, a boy of six years, revealed a membrane situated at the anterior commissure stretching between the cords, an opening only left in the posterior part of the glottis. There did not seem to be any interference with the respiration. The complaint was weakness of the voice. The question was: "Should treatment be undertaken?"

Hutchinson spoke of a similar case, the results of operation on which had been very unsatisfactory.

Donelan thought that while there was no interference with the respiration it would be better to avoid all treatment.

Powell said that the consensus of opinion seemed to be that the case should be left alone at present. If operation were found necessary he thought that the operation would be best performed through a high tracheotomy and that after the removal of the web, suitable silver plugs should be worn above and resting on the tracheotomy tube for a period of six to twelve months.

Grant said that the chief anxiety would be lest the child had one of the exanthemata, in which case the laryngitis would be apt to be suffocative.

EARLE B. FOWLER.

Abbe: Malignant Disease of the Tongue and Mouth. *Med. Rec.*, 1913, lxxxiii, 46.

By Surg., Gynec. & Obst.

In a study of the records of the past ten years in his personal cases, including notes and illustrations

of 40 cancers of the tongue, 15 leucoplakias, 27 sarcomas of the jaw and epuli, 40 sarcomas of the pharynx and tonsil, and carcinomas of the mouth and cheeks, besides many tumors of the lip, palate and buccal mucosa, the author concludes:

"Thorough surgery is still the supreme reliance in eradication of malignant disease of the mouth and an early resort to it is the patient's chief hope of cure. Radium has many interesting conquests in this field, but in advanced cases of cancer its good effect is transient; in giant celled sarcoma, it is a specific cure. The vicious causative effect of tobacco in the mouth is demonstrated. Leucoplakia has no curative remedy unless it be radium."

Papilloma and giant celled sarcoma succumb rapidly to the effects of the radium and the author regards it as a specific. In advanced cancer of the tongue, of the so-called "explosive" type, where there is great erosion and glandular enlargement, radium has controlled the process for a time, only to have the disease light up again. The action of the radium, the author suspects, is due to the temporary control of the bacterial activity either by the specific bactericidal power of the radium or by hyperemia called out by the intense play of electrons in the tissue.

Tobacco, either indirectly through the hot smoke coming in contact with the mucosa or the irritation of the pipe stem, or directly as from chewing, is given as the great cause of the leucoplakias and early cancerous degenerations.

H. P. KUHN.

Gorse and Dupuich: Cancer of the Tongue in Young Subjects (Le cancer de la langue chez les jeunes sujets). *Rev. de chir.*, 1912, xlvii, 293.

By Journal de Chirurgie.

Gorse and Dupuich report the case of a soldier 22 years of age who presented an unquestionable cancer of the tongue which had developed during seven months. Operation. Recurrence at the end of seven months and death without further operation. Histological examination verified the character of the tumor: squamous-cell epithelioma.

The published cases of cancer of the tongue in subjects under 30 years of age number thirty. They are, therefore, rare but they are, in contrast to this cancer in the adult, more frequent in females. It is hardly possible to ascribe the cause in this class of patients to syphilis or chemical poisons.

The site of the lesion is more frequently on the edge of the tongue as a result of irritation by carious teeth. Glandular involvement is rare. The affection is very painful, with radiating pains and earache, but the general condition remains good for a long time.

The only rational treatment is surgical. Survival is very short and recurrence rapid, which emphasizes the peculiar gravity of this form of cancer.

J. OKINCZYC.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

The technique of injections of common salt solutions. KUHN. Zentralbl. f. Chir., 1913, xl, No. 9.

The spatelholz method of preparing transparent animal bodies. H. PRINZ. J. Mo. St. M. Ass., 1913, ix, 295.

Aseptic and Antiseptic Surgery

Sterilization of the skin. E. McDONALD. Am. Med., 1913, xix, 167.

Clinical and statistical contribution on disinfection of the skin by tincture of iodine. GAETANO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 25.

Iodine disinfection of the mucous membrane of the mouth. E. SCHUSTER. Deutsche med. Wchnschr., 1913, xvi, 230.

Peritoneal disinfection by means of tincture of iodine. LUCARELLI. Clin. chir., Milano, 1913, xxi, No. 2.

Employment of bolus alba for disinfection of the hands. GÜNTHER. Zentralbl. f. Chir., 1913, xl, 461.

Disinfection of the hands by means of Bolus soap and Polus paste after Liermann. KUTSCHER. Berl. klin. Wchnschr., 1913, l, 629.

Clinical experience with rapid disinfection by chlorometacresol. KONDRING. Deutsche med. Wchnschr., 1913, xxxix, No. 11.

Phobrol "Roche," a new disinfectant. B. KANTOROWICZ. Deutsche zahnärztl. Wchnschr., 1913, xvi, 205.

Moist dressings and moist compresses in acute infections. P. HERZ. Deutsche med. Wchnschr., 1913, xxxix, 658.

Preparation of catgut ligatures. E. McDONALD. Am. Med., 1913, xix, 168.

Safeguarding the instruments during operations. HOWARD LILIENTHAL. Med. Times, 1913, xli, 72.

The secretions in the glove. R. SCHAEFFER. Zentralbl. f. Gynäk., 1913, xxxvii, 206.

Anæsthetics

A new ether vaporizer; technique of insufflation anæsthesia. K. CONNELL. J. Am. M. Ass., 1913, lx, 892.

Chloroform narcosis and diseases of the liver. W. HILDEBRANDT. München. med. Wchnschr., 1913, lx, 527.

The glands of internal secretion in case in which death was due to chloroform. J. HORNOWSKI. Lwowski Tygodnik lek., 1913, viii, 97. [1]

Acute yellow atrophy of the liver in relation to revival from chloroform narcosis; a casuistic contribution on the harmful remote effects of chloroform. A. BRACKEL. Samml. klin. Vortr., 1913, dclxxiv, 539.

Nitrous oxide and oxygen in major surgery. H. M. PAGE. Proc. Roy. Soc. Med., 1913, vi, 27.

Oxygen as an adjuvant in general anæsthesia. H. R. PHILLIPS. Practitioner, Lond., 1913, xc, 607.

General anæsthesia by the intravenous route. W. F. HONAN. J. Am. Inst. Homeopathy, 1913, v, 928.

Does the "test narcosis" permit of determining whether scopolamine-pantopon narcosis will be tolerated in the subsequent operation? HOLDER. Zentralbl. f. Gynäk., 1913, xxxvii, No. 11.

Researches on narcosis by scopolamine in combination with morphine, pantopon, and narcophine. REICHEL. München. med. Wchnschr., 1913, lx, No. 12.

Local anæsthesia by cataphoresis. LUNDGREN, SCHÉLE and SVEDIN. Hygiea, Stockholm, 1913, lxxv, No. 2.

Local anæsthesia by infiltration. POZZATO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 22.

Spinal anæsthesia. GUTIERREZ RIVAS. Rev. med. de Yucatan, 1913, viii, No. 4.

Spinal anæsthesia. GORSE. Gaz. d. hôp., Par., 1913, lxxxvi, No. 31.

General spinal anæsthesia. JONNESCO. Zentralbl. f. Chir., 1913, xl, 469. [1]

Paralysis of the sixth spinal nerve as a complication of spinal anæsthesia. TENANI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 9.

Observations of the effect of spinal narcosis in tabetic visceral crises. BÖKELMANN. Allg. Ztschr. f. Psychiat., 1913, lxx, 167.

Observation of phenomena resembling heart-block after lumbar anæsthesia. VOGEL and KRAEMER. Med. Klin., 1913, ix, No. 10.

Venous anæsthesia. I. C. CHASE. Texas St. J. M., 1913, viii, 308.

The intravenous use of hedonal as an anæsthetic. J. E. PIRRUNG. Lancet-Clin., 1913, cix, 269.

Clinical observations concerning hormonal. ZARNITZYNE. Kazan. med. J., 1913, xii, No. 5.

Results obtained with eusemin in operations of slight and medium gravity. J. MEISEN. Med. Klin., 1913, ix, 504.

Hyoscine-morphia anæsthesia for alcohol injection in neuralgia. W. HARRIS. Lancet, Lond., 1913, clxxxiv, 881. [2]

Anæsthesia of the brachial plexus after Kulenkampff's method. P. BABITZKI. Deutsche med. Wchnschr., 1913, xxxix, 652.

Paralysis of the phrenic nerve in plexus anæsthesia after Kulenkampff. R. SIEVERS. Zentralbl. f. Chir., 1913, xl, 338. [2]

Anæsthesia of the joints. DEUTSCHLANDER. Zentralbl. f. Chir., 1913, xl, No. 11.

On the causes and avoidance of abdominal rigidity under anæsthesia. J. D. MORTIMER. Clin. J., 1913, xli, 377.

Warming anæsthetic vapors neither useless nor fallacious. R. C. COBURN. *Med. Rec.*, 1913, lxxxiii, 382.

Present day method of anesthesia. W. M. BOOTHBY. *J. Maine M. Ass.*, 1913, iii, 1219. [2]

The problem of anesthesia. CHAMBARD. *Arch. méd.-de Province*, Poitiers, 1913, viii, No. 2.

The psychologic side of anesthesia. H. R. TRICK. *Buffalo M. J.*, 1913, lxviii, 447.

Researches on narcosis. B. KISCH. *Ztschr. f. Biol.*, 1913, lx, 399.

Electro-cardiographic studies on narcosis. A. F. HECHT and EDMUND NOBEL. *Ztschr. f. d. ges. exper. Med.*, 1913, i, 23.

New methods of local anæsthesia and general narcosis. WETTSTEIN. *Med. Klin.*, 1913, ix, No. 9.

Studies in blood pressure before, during, and after operations under local and general anæsthesia. J. C. BLOODGOOD. *Tr. Am. Gynec. Soc.*, 1913, May. [3]

Surgical Instruments and Apparatus

A new somnoform inhaler. R. W. HORNABROOK. *Austral. M. Gaz.*, 1913, xxxiii, 256.

A new and inexpensive intratracheal insufflation outfit. MOSES SALZER. *J. Am. M. Ass.*, 1913, lx, 826.

Demonstration of a modified and simplified apparatus for administering gas and oxygen without ether. A. L. FLEMING. *Proc. Roy. Soc. Med.*, 1913, vi, 43.

Demonstration of Elsberg's apparatus. J. F. W. SILK. *Proc. Roy. Soc. Med.*, 1913, vi, 44.

A flat canula for intravenous injections. JESSNER. *Med. Klin.*, 1913, ix, No. 11.

A modification of Killian's hooked spatula for use in

suspension laryngoscopy. LAUTENSCHLAGER. *Berl. klin. Wchnschr.*, 1913, l, No. 10.

A new tonsillotome. W. EDWARDS-SCHENCK. *J. Am. M. Ass.*, 1913, lx, 827.

Aspirating tubes for the extraction of foreign bodies from the bronchi. BOTEY. *Arch. internat. de laryngol., d'otol. et de rhinol.*, 1913, xxxv, No. 1.

A visceral depressor. D. HADDEN. *J. Am. M. Ass.*, 1913, lx, 897.

A visceral depressor for use in closing laparotomy wounds. L. M. KAHN. *J. Am. M. Ass.*, 1913, lx, 897.

The vaginal drying-pad. SCHARFE. *Berl. klin. Wchnschr.*, 1913, l, No. 9.

An immovable ball which can quickly be attached to any kind of cystoscopic forceps and serves the purpose of immobilizing the cystoscope. MARION. *J. d'Urol.*, 1913, iii, No. 3.

A costal forceps for facilitating the resection of ribs. WILMS. *Zentralbl. f. Chir.*, 1913, xl, No. 11.

A suction hand-valve for clearing the operative field. E. S. KILGORE. *J. Am. M. Ass.*, 1913, lx, 897.

An apparatus for the illumination of the field of operation for use in small hospitals. L. PROCHOWNICK. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 460.

A useful lampstand attachment. E. M. BIXBY. *J. Am. M. Ass.*, 1913, lx, 900.

An improved X-ray generator. S. TOUSEY. *N. Y. M. J.*, 1913, xcvi, 648.

A practical electric perimenter. N. M. BLACK. *Ophth. Rec.*, 1913, xxii, 135.

An operating table for use in animal research. K. STEBBINS. *Ann. Surg., Phila.*, 1913, lvii, 435.

SURGERY OF THE HEAD AND NECK

Head

A case of melanotic sarcoma of the scalp; removal. H. W. SYKES. *Transvaal M. J.*, 1913, viii, 205.

Confluent tumors of the scalp; sebaceous adenomata. PORTO. *Arch. Brasil. de med.*, 1912, ii, No. 6.

Primary actinomycosis of the cheek. ZILZ. *Wien. med. Wchnschr.*, 1913, lxiii, No. 13.

Plastic surgery of the mucous membrane of the cheek. SCHMIEDEN. *Berl. klin. Wchnschr.*, 1913, l, 564.

A cheek defect and its repair by plastic operation. J. S. DAVIS. *Ann. Surg., Phila.*, 1913, lvii, 361.

A spectacular case of lipomoxoma. H. C. LITTLE. *J. Am. M. Ass.*, 1913, lx, 899.

The etiology of tumor of the angle of the mouth and the relations between it and diplobacilli blepharoconjunctivitis. S. ISHIWARA and K. TSUKADA. *Japanische Ztschr. f. Militärärzte*, 1913, No. 39.

Autoplastic surgery of the mental region. LEFEVRE. *Arch. gén. de Chir.*, 1913, vii, No. 2.

Anatomical considerations on nerve injections in facial neuralgia. CORSY. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 27.

Injections into the Gasserian ganglion after Haertel's method in neuralgia of the 5th nerve. A. SIMONS. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 1913, xiv, 483.

Treatment of neuralgia of the trigeminal nerve by injections of alcohol in the region of the foramen rotundum, of the foramen ovale, and of the Gasserian ganglion. SCHWARZ. *Lijecniki Vijesnik, Agram*, 1913, xxxv, No. 2.

Suppurating parotitis in typhoid; treatment of typhoid. WM. J. PARKS. *Med. World*, 1913, xxxi, 105.

Post-operative parotiditis. VALENTIN. *Berl. klin. Wchnschr.*, 1913, l, No. 10.

Affections of the salivary glands resembling mumps. C. HEGLER. *Beitr. z. Klin. d. Infektionskrankh. u. z. Immunitätsforsch.*, 1913, i, 229.

Primary epithelioma of the submaxillary glands. TONMEUX and GINESTY. *Bull. et mem. Soc. anatom. de Par.*, 1913, xv, 61.

Congenital fissures of the chin and other malformations in the region of the first branchial arch. GUNTHER. *Beitr. z. path. Anat. u. z. allg. Path.*, 1913, lv, No. 3.

The treatment of harelip associated with wide complete fissure of the jaw. W. NEUMANN. *Deutsche med. Wchnschr.*, 1913, xxxix, 559.

An interesting case of sarcoma of the superior maxillary. SCHOTTLANDER. *Deutsche Ztschr. f. Chir.*, 1913, cxix, Nos. 3-4.

Tumor of the superior maxillary bone. TOURNEUX. *Toulouse méd.*, 1913, xv, No. 5.

Fibroma of the maxilla. L. S. KETTLEWELL. *Proc. Roy. Soc. Med.*, 1913, vi, 53.

Two cases of adamantoma of the lower jaw. S. RUFF and J. HORNOWSKI. *Przegl. chir. i ginec.*, 1913, viii, 157.

The literature on maxillary cysts. HAIKE. *Beitr. z. Anat., Physiol., Pathol. u. Therap. d. Ohres., d. Nase. u. d. Halses*, 1913, vi, No. 3.

Histogenesis of the lower maxillary bone. HERPIN. *Progrès méd.*, Par., 1913, xli, No. 13.

Resection of three-fourths of the lower jaw by the buccal route and a new method for mandibular prosthesis. ALLESSANDRI and CHIAVARO. *Policlin., Roma*, 1913, xx, 49. [3]

- Fractures of the upper jaw; statistical contributions. VOGEL. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 12.
- Intradental splints or extra-buccal dressings in the treatment of fractures of the jaw? FRENZEL. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 12.
- Localization of intracranial neoplasm after decompression. T. A. WILLIAMS. *Wash. M. Ann.*, 1913, xii, 108.
- Limited arrest of development of the cutaneous and osseous envelope of the skull. BONNAIRE and DURANTE. *Presse méd.*, 1913, xxi, No. 20.
- Perforating wound of the cranium caused by revolver ball; craniomeningoectomy; recovery. DRÉ KOLLAS. *Grece med.*, Syra, 1913, xv, Nos. 1-2.
- Traumatic epilepsy secondary to injuries of the head. EGUCHI. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 3-4.
- Typical fracture of the skull. W. KORTE. *Deutsche med. Wchnschr.*, 1913, xxxix, 252.
- A rare form of fracture of the cranial vault extending to the base of the skull. GIORGI. *Rev. osp.*, Roma, 1913, ii, No. 5.
- The teratomata of the occipital region. TOURNEUX. *Arch. gén. de Chir.*, 1913, vii, No. 2.
- Sub-temporal muscle drainage by the aid of silver wire drainage mats in cases of congenital hydrocephalus. W. H. HUDSON. *Ann. Surg., Phila.*, 1913, lvii, 338. [3]
- Acute suppurative meningitis. LÓVEGREN. *Finska lak.-sallsk. handl.*, 1913, lv, No. 2.
- Septicemic cerebro-spinal meningitis. J. G. FITZGERALD. *Canad. J. M. & S.*, 1913, xxxiii, 189.
- Thrombosis of the sinuses of the dura mater. U. MANCINI. *Riv. osp.*, 1913, iii, 203.
- Rupture of an encephalocele; operation; recovery. PERIMOFF. *Kazan. med. J.*, 1913, xii, No. 5.
- Extirpation of a tumor the size of a small fist from the cerebral meninges under local anæsthesia. ANDRE. *München. klin. Wchnschr.*, 1913, lx, No. 10.
- Case of subcortical cerebral tumor, tuberculous in nature, removed by operation; recovery. G. HALL. *Lancet, Lond.*, 1913, clxxxiv, 678.
- Surgery of brain tumors; a case of subcortical endothelioma. P. BABITZKY. *Chir. Arch. Veliaminova, St. Petersburg.*, 1913, xxix, 89.
- Gradually developing hemiplegia due to a cerebral neoplasm. H. M. FUSSELL and S. LEOPOLD. *Penn. M. J.*, 1913, xvi, 427.
- Pathological-anatomical changes in cysticercus of the cerebrum. M. S. MARGULIS. *Deutsche Ztschr. f. Nerven.*, 1913, xlvi, 1.
- Abscess of the brain, osteomyelitis of the frontal bone, and empyema of the frontal sinus. LUBBERS. *Arch. f. Ohrenh.*, 1913, xc, No. 3.
- Stab wound in the brain in the left temporal region. A. KARSCHULIN. *Wien. med. Wchnschr.*, 1913, lxiii, 269.
- A study of Wernicke's tactile paralysis as a sequel of injury of the brain by a projectile. SZTANOJEVITS. *Med. Klin.*, 1913, ix, No. 12.
- Ependymal gliomatosis of the ventricles of the brain. M. S. MARGULIS. *Arch. f. Psychiat.*, 1913, l, 788.
- Cerebral syphilis not provoked by an injury of the head. ENGEL. *Med. Klin.*, 1913, ix, No. 12.
- Report of two cases exhibiting lesions of special interest for the localization of aphasic disorders. L. ARCHABAULT. *Albany M. Ann.*, 1913, xxxv, 125.
- Recent advances in cerebral localization. G. A. MOLEEN. *Colo. Med.*, 1913, x, 89.
- Investigations on the nature of cerebral pressure. JAUPTMANN. *Allg. Ztschr. f. Psychiat.*, 1913, lxx, 164.
- Report of cases illustrating certain phases of cerebrospinal surgery. S. RODMAN. *Penn. M. J.*, 1913, xvi, 432.
- A case of cerebello-pontine tumor. C. A. VEASEY. *Ophth. Rec.*, 1913, xxii, 138.
- Localization in the cerebellum. M. ROTHMANN. *Berl. klin. Wchnschr.*, 1913, l, 336.
- Clinical observations in a case of tumor of the cerebellum. LAUREATI. *Policlin.*, Roma, 1913, xx, 199.
- The so-called "serous" cysts of the cerebellum. W. WERSILOW. *Neurol. Zentralbl.*, 1913, xxxii, 350.
- Tonicity and strength of the muscles in lesions of the cerebellum. A. VOLPE. *Gior. internaz. d. sc. med.*, 1913, xxxv, 97.
- Concerning the symptomatic differentiation between disorders of the two lobes of the pituitary body; with notes on a syndrome accredited to hyperplasia of the anterior and secretory stasis or insufficiency of the posterior lobe. HARVEY CUSHING. *Am. J. M. Sc.*, 1913, cxlv, 313. [5]
- The pituitary body in disease; the method and the results of surgical intervention. CHAS. H. FRAZIER. *Penn. M. J.*, 1913, xvi, 421. [5]
- Investigation of the gaseous metabolism in tumor of the sella turcica. S. BERNSTEIN. *Ztschr. f. d. ges. exp. Med.*, 1913, i, 104.
- An approach to the hypophysis through the anterior cranial fossa. CHAS. H. FRAZIER. *Ann. Surg., Phila.*, 1913, lvii, 145. [6]

Neck

- Neck fistulas and cysts. R. WENGLOWSKI. *Arch. f. klin. Chir.*, 1913, c, 789. [6]
- A case of median fistula of the neck. BUNDE. *Berl. klin. Wchnschr.*, 1913, l, No. 12.
- Hyomandibular fistula; a new form of congenital cervical fistula. KÜTTNER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 11.
- Hygroma cysticum colli; its structure and etiology. DOWD. *Tr. Am. Surg. Ass.*, 1913, May. [7]
- A case of tonico-clonic spasmodic torticollis. DESQUEYROUX. *J. de méd. de Bordeaux*, 1913, xliii, No. 12.
- Flexion with luxation of the fifth cervical vertebra. P. SUDECK. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 34.
- A report on two cases of cervical rib and an operative measure to prevent recurrence of symptoms. C. H. MCKENNA. *Surg., Gynec. & Obst.*, 1913, xvi, 322. [7]
- Cervical rib; report of 31 cases. M. S. HENDERSON. *Tr. Am. Orthop. Ass.*, 1913, May. [8]
- Experimental observations on effects of administration of iodine in three cases of thyroid carcinoma. D. MARINE and A. A. JOHNSON. *Arch. Internal. Med.*, 1913, xi, No. 3.
- Addenda to the report on tuberculosis of the thyroid gland. DUTOIT. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 10.
- A case of tertiary syphilis of the thyroid body and of the neck. PUJOL. *Progrès méd.*, 1913, xli, No. 13.
- Hyperthyroidism (forme frusta of myxoedema). A. SAENGER. *Dermatol. Wchnschr.*, 1913, lvi, 357.
- Goiter and hyperthyroidism. J. B. HASKINS. *J. Tenn. St. M. Ass.*, 1913, vi, 443.
- Transplantation of the thyroid gland into the spleen and into the bone marrow. KOTZENBERG. *Med. Klin.*, 1913, ix, 455.
- Experiments on artificial production of goiter. BLAUDEL. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 2.
- Critical and experimental investigations on goiter. B. BREITNER. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxv, 808.
- Aberrant goiter of the submaxillary space. CROWTHER. *Riforma med.*, 1913, xxix, 232. [9]

When shall we operate for goiter? A. W. BLAIN. *Internat. J. Surg.*, 1913, xxvi, 73.

Ligation of superior thyroid for goiter under local anæsthesia; case report. L. WATSON. *Old Dominion J.*, 1913, xvi, 125.

Operation for goiter. WESTHOFF. *Med. Weekblad*, Amsterdam, 1913, xix, No. 50.

Lettsomian lecture on the surgery of the thyroid gland, with special reference to exophthalmic goiter. JAS. BERRY. *Lancet*, Lond., 1913, clxxxiv, 583.

Surgery of the thyroid gland, with special reference to exophthalmic goiter. JAS. BERRY. *Lancet*, Lond., 1913, clxxxiv, 668 and 737.

The pathology of the thyroid gland in exophthalmic goiter. L. B. WILSON. *Tr. Ass. Am. Physicians*, 1913, May, [9]

The thyrogenic origin of Basedow's disease. J. H. JACOBSON. *Ann. Surg.*, Phila., 1913, lvii, 341. [10]

The histological picture of Basedowstruma in its relationship to the clinical picture of Basedow's disease. J. OEHLER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 156.

Basedow's disease. ROBERT BING. *Schweizer Rundsch. f. Med.*, 1913, xiii, 409.

Basedow's disease following an injury. MILLER. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, Nos. 1-2.

The treatment of Basedow's disease. RUBINO. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

A case of Riedel's struma which developed after thyroidectomy. H. SIMON. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 149.

Parathyroid insufficiency and its treatment. MOREL. *Paris méd.*, 1913, ii, No. 15.

SURGERY OF THE CHEST

Chest Wall and Breast

The physiology of milk secretion. E. A. SCHAFER. *Med. Press & Circ.*, 1913, cxlvi, 306.

Non-malignant retraction of the nipple. JAS. J. TERRILL. *Tex. St. J. M.*, 1913, viii, 300.

A case of hypertrophy of the mammary glands. W. J. GUSSEW. *Gynäk. Rundschau*, 1913, vii, 131. [10]

A case of endothelioma of the breast in man. CAMINITI. *Gazz. d. osp. e d. clin. Milano*, 1913, xxxiv, No. 37.

The operative treatment of cancer of the breast. A. DE ROULET. *Am. J. Surg.*, 1913, xxvii, 92.

Review of five hundred and thirty-four operations on the mammary gland. JOHN B. DEEVER. *J. Am. M. Ass.*, 1913, lx, 795. [10]

Cleidoplastic operation using the spina scapulæ. MOLINEUS. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 180. [11]

The first rib simulating a cervical rib. B. SAWICKI and J. SKŁODOWSKI. *Przegl. chir. i ginec.*, 1913, viii, 195.

Epithelial tumors of the clavicle. C. KARAJANNOPOULOS. *Bull. Ass. franç. pour l'étude de cancer*, 1912, v, 90. [11]

A simple dressing for the treatment of fractures of the clavicle. JANSEN. *München. med. Wchnschr.*, 1913, lx, No. 9.

The congenital absence of ribs; report of case with complete absence of the left seventh and eighth ribs. C. SMITH. *J. Am. M. Ass.*, 1913, lx, 895. [12]

Negative pressure in the thorax. H. VON WYSS. *Deutsche Arch. f. klin. Med.*, 1913, cix, 595.

Artificial pneumothorax. M. E. LAPHAM. *N. Y. M. J.*, 1913, xcvi, 582.

Artificial pneumothorax. A. KNOPF. *N. Y. M. J.*, 1913, xcvi, 581.

A few experiences with artificial pneumothorax. A. A. VAN DEN BERGH HYMAN. *Beitr. z. Klin. d. Tuberk.*, 1913, xxvi, 47.

Artificial and spontaneous pneumothorax. KOCH. *Beitr. z. Klin. d. Tuberk.*, 1913, iv, 114.

Pathogenesis of sudden death following treatment by artificial pneumothorax. LINDHAGEN. *Nordisk Tidskrift f. Terapi*, 1913, xi, No. 6.

The uncertainties of the treatment of pulmonary tuberculosis by artificial pneumothorax; report of a fatal case, with autopsy. BROWN and KRAUSE. *Tr. Ass. Am. Physicians*, 1913, May. [12]

Pleuritic extravasation into the pneumothorax. NARDI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 18.

A case of pleural empyema cured by thoracotomy. BOZZOTTI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 13.

A study of empyema, with special reference to the feasibility and importance of dependent drainage. T. T. THOMAS. *Am. J. M. Sc.*, 1913, cxlv, 405.

The surgical treatment of purulent pleurisy. M. ROUSSIEL. *Clinique, Bruxelles*, 1913, xxvii, 177.

Radiotherapy of thymic hyperplasia. DUTOIT. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 11.

Action of X-rays on the thymus and on the blood of the rabbit. EGGERS. *Ztschr. f. Röntgenkunde u. Radiumforsch.*, 1913, xv, No. 2.

Status thymolymphaticus and salvarsan. RINDFLEISCH. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

X-ray diagnosis of enlargement of the bronchial glands. ENGEL. *Med. Klin.*, 1913, ix, 336.

Trachea and Lungs

Foreign bodies in the air passages and the œsophagus. R. H. T. MANN. *Med. Fortnightly*, 1913, xliii, 112.

Some endoscopic methods. R. H. JOHNSTON. *Maryland M. J.*, 1913, lvi, 53.

My experience with tracheotomy based on 50 cases. DIDIER and NAVRATIL. *Arch. internat. de laryngol., d'otol. et de rhinol.*, 1913, xxxv, No. 1.

A case of foreign body in the trachea. SUNE and MEDAN. *Rev. de cienc. med. de Barcelona*, 1913, xxxix, No. 2.

Neofomations of the larynx, the trachea, and the bronchi. P. VON BRUNS. *Handb. f. prakt. Chir.*, 1913, 1-39.

Broncho-œsophageal fistula in a case of aneurism of the aorta. DORNER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 9.

Primary carcinoma of larger bronchi. C. V. WELLER. *Arch. Internal Med.*, 1913, xi, No. 3.

Asphyxiation in consequence of the rupture of a tuberculous gland into the bronchus. F. OERI. *München. med. Wchnschr.*, 1913, lx, 410.

Cancer of the lung; medullary epithelioma of the pavement epithelium. BASSAL and SERR. *Toulouse méd.*, 1913, xv, No. 4.

Indications for operation in hydatid cysts of the lung. CHARRIER. *Arch. prov. de chir.*, 1913, xxii, No. 2.

First aid in asphyxiation by direct insufflation of air. KUHN. *München. med. Wchnschr.*, 1913, lx, 647.

Investigations on ventilation of the lungs in artificial respiration in man. G. LILJESTRAND and J. O. NILSSON. *Skandinav. Arch. f. Physiol.*, 1913, xxix, 149.

Experiments on surgery of the lungs performed on animals. SCHEPELMANN. Arch. f. klin. Chir., 1913, c, No. 4.

Localization of pulmonary embolism. R. KRETZ. Zentralbl. f. allg. Pathol. u. pathol. Anat., 1913, xxiv, 195.

Trendelenburg's operation for pulmonary embolism. E. WOLFF. München. med. Wchnschr., 1913, lx, 781. [13]

Freund's operation for emphysema. M. FLESC. Fortschr. d. Med., 1913, xxxi, 281.

Heart and Vascular System

Comparison of the œsophageal pulse and the jugular pulse in a case of primary tumor of the left auricle. BARD. Semaine méd., 1913, xxxiii, No. 12.

Puncture wounds of the heart. BOEHM. Deutsche Ztschr. f. Chir., 1913, cxxi, Nos. 3-4.

Five cases of suture of the heart. F. T. STEWART. Tr. Am. Surg. Ass., 1913, May. [13]

Surgery of the valves of the heart; experimental investigations. E. SCHEPELMANN. Deutsche Ztschr. f. Chir., 1913, cxx, 562.

Temporary arrest of the heart beats following incision of the pericardium for suppurative pericarditis. A. H. HARRIGAN. Ann. Surg., Phila., 1913, lvii, 367. [15]

Surgery of the pulmonary artery. W. MEYER. Tr. Am. Surg. Ass., 1913, May. [15]

Aneurism of the aorta associated with dysphagia.

RISPAL, LAVAL and TIMBAL. Province méd., Par., 1913, xxvi, No. 12.

Intrathoracic aneurism. F. D. HALL. Lancet, Lond., 1913, clxxxiv, 803.

Pharynx and Œsophagus

Acute miliary tuberculosis of the pharynx. A. MEYER. Ztschr. f. Laryngol., Rhinol., 1913, v, 1061.

A case of pharyngectomy resulting in recovery. GORIS. Ann. de l'inst. chir. de Bruxelles, 1913, xx, 62.

Two uncommon œsophageal cases. A. BASSLER. J. Am. M. Ass., 1913, lx, 801.

Foreign bodies in the œsophagus. F. S. SSAKOWITCH. Ärzte-Zeitg., 1913, xx, 348.

Œsophagoscopy for foreign bodies in the œsophagus. HOULIE. Arch. internat. de laryngol., d'otol. et de rhinol., 1913, xxxv, No. 1.

Diagnosis and treatment of cicatricial stenoses of the œsophagus. GUISEZ. Arch. internat. de laryngol., d'otol. et de rhinol., 1913, xxxv, No. 1.

Impenetrable stenosis of the œsophagus. (Glück's procedure.) WACHMANN. Gaz. med., 1913, ii, No. 17.

Additional remarks on cardiospasm and idiopathic dilatation of the œsophagus. M. EINHORN. Med. Rec., 1913, lxxxiii, 369.

The effect produced in pulmonary affections by the artificial paralysis of the diaphragm. F. SAUERBRUCH. München. med. Wchnschr., 1913, lx, 625. [16]

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

A plea for larger abdominal incisions and less drainage. W. R. DICKENS. Med. Fortnightly, 1913, xliii, 74.

Treatment of dropsy by permanent drainage. PÉRI-MOFF. Kazan. med. J., 1913, xii, No. 5.

Gunshot wounds of the abdomen. M. KAHN. J. Am. M. Ass., 1913, lx, 955.

Report of a series of cases of gunshot wounds in the abdomen. E. F. ROBINSON. Med. Herald, 1913, xxxii, 116.

A lecture on abdominal injuries. V. ZACHARY COPE. Clin. J., 1913, xli, 385.

Inflammatory abdominal tumors. L. MIECZKOWSKI. Przegl. chir. i ginec., 1913, viii, 9.

An inflammatory desmoid of the abdominal wall. TRAPL. Čas. lék. česk., 1913, lii, 236. [16]

Peritoneal adhesions. J. E. ADAMS. Lancet, Lond., 1913, clxxxiv, 663.

Peritoneal pseudomyxoma with involvement of the ovaries and the appendix. RATHE. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, No. 3.

Free transplantation of peritoneum. FRIEDMANN. Zentralbl. f. Chir., 1913, xl, 270.

So-called generalized peritonitis among men of the army and its treatment. MAISONNET and OLLE. Arch. de méd. et de pharm. mil., 1913, lix, No. 3.

Tuberculous peritonitis associated with stenosis of the bile-ducts. MOUISSET and GATE. Lyon méd., 1913, cxx, No. 9.

The operative treatment of tuberculosis of the peritoneum. HOEVEL. Zentralbl. f. Chir., 1913, xl, 466.

Treatment of diffuse septic peritonitis. H. A. BRUCE. Canad. J. M. & S., 1913, xxxiii, 178.

Five fibromo myoma of the diaphragm simulating hydatid cysts of the liver; myomectomy; cure of the patient; presentation of specimen. R. BONAMY. Paris chir., 1913, iv, 1051. [16]

Resection of the diaphragm. W. OPPEL. Chir. Arch. Veliaininova, 1913, xxix, 10.

Hernias. O. FOEDERL. Wien. med. Wchnschr., 1913, lxiii, 801.

Observations on inguinal hernia. L. SEXTON. Tex. M. J., 1913, xxviii, 359.

Etiology of hernia. P. BERNSTEIN. Arch. f. klin. Chir., 1913, c, 1094. [17]

The etiology of cysts connected with hernia sacs. R. W. MURRAY. Lancet, Lond., 1913, clxxxiv, 746.

Anatomical researches on pectineal hernia. MANTELLI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 15.

The direction taken by hernia pectinea. HARZBECKER. Zentralbl. f. Chir., 1913, xl, 470.

A case of foreign body in a hernia sac. STASSOFF. Russk. Vrach, St. Petersburg., 1913, xii, No. 6.

A case of direct hernia. DEHEE. J. d. sc. méd., Lille, 1913, xxxvi, No. 8.

Internal hernia. JOS. H. FOBES. J. Am. Inst. Homoeopathy, 1913, v, 919.

Two ventral hernias. CORMIO. Rev. osp., 1913, ii, No. 4.

Strangulated hernia. H. GOLDSTEIN. N. Y. M. J., 1913, xcvi, 447.

Strangulated properitoneal hernia as a sequela of an eventration. CLEMENT. Province méd., Par., 1913, xxvi, No. 11.

A case of strangulated diaphragmatic hernia. GOUREVITCH. Russk. Vrach, St. Petersburg., 1913, xii, No. 8.

The treatment of hernia in children. A. J. OCHSNER. J.-Lancet, 1913, xxxiii, 127. [18]

The radical cure of umbilical and ventral hernia. TRAZZI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 4.

Concerning the treatment of hernia, specifically, the hernia permagna. O. WITZEL. München. med. Wchnschr., 1913, lx, 516.

Operation for strangulated inguinal hernia under local anæsthetic. G. R. HIND. *Guy's Hosp. Gaz.*, 1913, xxvii, 108.

Chronic inflammations of the omentum in relation to chronic appendicitis and colitis. M. HALLER. Paris: Steinheil, 1912. [18]

Obliteration of the mesenteric vessels. LEOTTA. *Policlin.*, Roma, 1913, xx, No. 3.

Gastro-Intestinal Tract

The etiology, symptomatology, diagnosis and treatment of acquired displacement and fixation of the stomach and intestines. T. R. BROWN. *Tr. Ass. Am. Physicians*, 1913, May. [18]

Researches on pyloric spasm and pancreatic ferments in nurslings by means of a simple duodenal catheter. HESS. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 9.

Motility of the pathological stomach studied by the aid of the radiocinemograph. BRUEGEL. *München. med. Wchnschr.*, 1913, lx, 593.

Hæmatemesis as a cause of death. D. E. CORE. *Med. Chronicle*, 1913, lvii, 311.

Gastric arteriosclerosis; a case of hæmatemesis caused by arteriosclerosis. LAGO. *Riforma med. Napoli*, 1913, xxix, No. 9.

Hæmatemesis caused by gastric arteriosclerosis. BITOT and MAURIAC. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 30.

A case of bilocular stomach, diagnosed by radioscopy and operated by the procedure of gastro-anastomosis. VIGNARD. *Gaz. méd. de Nantes*, 1913, xxxi, No. 12.

Partial volvulus of the stomach. O. ORTH. *Wien. klin. Wchnschr.*, 1913, xxvi, 457.

Post-operative dilatation of the stomach. H. A. DUNCAN. *N. Y. M. J.*, 1913, xcvii, 502.

Carcinoma of the stomach. JAS. LANGWILL. *Edinb. M. J.*, 1913, x, 222.

Sarcoma of the stomach. G. FLEBBE. *Frankf. Ztschr. f. Pathol.*, 1913, xii, 311.

Primary cystic sarcoma of the stomach. KONDRING. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 11.

Pedunculated myosarcoma of the gastric wall. AMELUNG. *Berl. klin. Wchnschr.*, 1913, l, 567.

Gastric syphilis simulating a neoplasm. LOMBARDI COMITE. *Gazz. d. osp. e d. Clin.*, Milano, 1913, xxxiv, No. 26.

Successful transpleural resection of the carcinoma of the cardia. J. H. ZAAIJER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 419. [20]

Pathogenesis of gastric ulcer; the power of resistance of living tissue to digestion. KATZENSTEIN. *Arch. f. klin. Chir.*, 1913, c, No. 4.

Clinical manifestations and treatment of perforated gastric and duodenal ulcers. G. A. WETTERSTRAND. *Deutsche Ztschr. f. Chir.*, 1913, cxi, 393.

The value of X-ray examinations in the diagnosis of ulcer of the stomach and duodenum. FRIEDENWALD and BAETJER. *Tr. Ass. Am. Physicians*, 1913, May. [21]

The reaction of various types of gastric and duodenal strictures to milk diet and a method of diagnosis of spastic-ulcerous strictures of these organs. S. JONAS. *Wien. klin. Wchnschr.*, 1913, xxvi, 401.

The results obtained by radiographic examination of ulcer of the stomach. SCHLESINGER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 12.

Ulcer of the stomach caused by X-rays. DESPLATS and BOSQUIER. *J. d. sc. méd. de Lille*, 1913, xxxvi, Nos. 10-11.

Round ulcer of the stomach and lymphatism. STOERK. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 11.

Ulcer of the stomach; perforation of the spleen, the diaphragm and the lung as a result of extension; repeated

hæmatemeses; blood transfusion; death. TANTON and GRENIER. *Progres méd.*, Par., 1913, xli, No. 12.

A personal experience with gastric ulcer. A. F. BURKARD. *Ellingwood's Therap.*, 1913, vii, 85.

Gastric ulcer without food retention; a clinical analysis of one hundred and forty operatively demonstrated cases. F. SMITHIES. *Am. J. M. Sc.*, 1913, cxlv, 340. [22]

Perforation of gastric or duodenal ulcers; inferences on modern treatment drawn from histories of patients who have recovered. E. M. CORNER. *Lancet*, Lond., 1913, clxxiv, 600. [23]

Perforation of ulcers into the free abdominal cavity. KRAUS. *Prag. med. Wchnschr.*, 1913, xxxviii, No. 10.

Gastric ulcer—medical treatment versus operative procedure. H. SMELTZER. *Med. World*, 1913, xxxi, 115. Diet tables and nutrient enemata in the treatment of gastric ulcer. E. GUINARD. *Post-Graduate*, 1913, xxviii, 247.

Contribution to the treatment of perforated gastric and duodenal ulcers. L. SIMON. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 26.

Results of surgical treatment in 69 cases of plain cancer, and cancer imbedded upon ulcers, of the stomach. G. FAROY. *Arch. de mal. de l'appar. digest.*, Par., 1913, vii, 61. [24]

Total ablation of the stomach. UNGER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 11.

Statistics of resection of the stomach. S. WEIL. *Berl. klin. Wchnschr.*, 1913, l, 390. [24]

Resection of the stomach. PERS. *Ugesk. f. Laeger*, Kjøbenh., 1913, lxxv, No. 11.

Tincture of iodine lavages of the mucous membrane in operations on the digestive tube. HOLBAUM. *Zentralbl. f. Chir.*, 1913, xl, No. 10.

Statistics of gastrectomy. WEIL. *Berl. klin. Wchnschr.*, 1913, l, No. 9.

The technique of gastro-enterostomy. JOSEPH. *Zentralbl. f. Chir.*, 1913, xl, 517.

Enterotomy or temporary enterostomy; report of case. GEO. R. NORBERG. *Med. Fortnightly*, 1913, xliii, 72.

A case of gastro-enterostomy which was revealed by radiography. DOUARRE. *Arch. d'élect. méd. exp. et clin.*, Bordeaux, 1913, xxi, No. 358.

The influence of gastro-enterostomy on gastric and duodenal ulcers. A. A. BERG. *J. Am. M. Ass.*, 1913, lx, 881. [25]

The cause and treatment of certain unfavorable after-effects of gastro-enterostomy. A. F. HERTZ. *Proc. Roy. Soc. Med.*, 1913, vi, 155. [25]

Pylorospasm. GLAESSNER and KREUZFUCHS. *München. med. Wchnschr.*, 1913, lx, 582. [26]

A case of perforating ulcer of the pylorus. E. KLOPPER. *Petersb. med. Ztschr.*, 1913, xxviii, 60.

The exclusion of the pylorus by a cord instead of by a thread. PARLAVECCHIO. *Zentralbl. f. Chir.*, 1913, xl, No. 9.

A further contribution on injury of the duodenum by a blunt weapon. SCHWABE. *Ärzt. Sachverst.-Zeitg.*, 1913, xix, 137.

The frequency of perforation in duodenal ulcer; observations on seven cases, with five discoveries. A. J. EVANS. *Med. Press & Circ.*, 1913, cxlvi, 252.

A further case of atresia of the duodenum. W. WEBER. *Med. Klin.*, 1913, ix, 411.

Duodenal motility. P. EISEN. *Wis. M. J.*, 1913, xi, 316.

Duodenal tumors and trauma. E. HILTMANN. *Ärzt. Sachverst.-Zeitg.*, 1913, xix, 140.

Duodenal ulcer. KREUZFUCHS. *Med. Klin.*, 1913, ix, No. 12.

- Diagnosis of duodenal ulcers. W. B. THORNING. *Tex. St. J. M.*, 1913, viii, 292.
- Perforating ulcer of the duodenum. D. S. LAMB. *Wash. M. Ann.*, 1913, xii, 99.
- Duodenotomy for removal of impacted sewing-machine needle. J. J. BUCHANAN. *Cleveland M. J.*, 1913, xii, 193.
- Intestinal obstruction; a clinical study of 181 cases. A. McGLANNAN. *J. Am. M. Ass.*, 1913, lx, 733. [26]
- Intestinal obstruction. I. A study of a toxic substance produced in closed duodenal loops. G. H. WHIPPLE, H. B. STONE and B. M. BERNHEIM. *J. Exp. M.*, 1913, xvii, 286. [26]
- Intestinal obstruction. II. A study of the toxic substance produced by the mucosa of closed duodenal loops. G. H. WHIPPLE, H. B. STONE and B. M. BERNHEIM. *J. Exp. M.*, 1913, xvii, 307. [27]
- Report of two cases of intestinal obstruction and a few points in regard to diagnosis. M. R. GRAIN. *Vt. M. Month.*, 1913, xix, 63.
- Intestinal invagination. PROPPING. *München. med. Wchnschr.*, 1913, lx, 782.
- Volvulus of the small intestine. A. LESNIEWSKI. *Prezgl. chir. i ginek.*, 1913, viii, 20.
- A case of volvulus of the entire small intestine, of the cæcum, and of the ascending colon in mesenterium ileo-cæcale commune. F. ZAHN. *Dissertation, Erlangen*, 1913.
- Henoch's purpura with intussusception: laparotomy recovery. S. BARLING. *Brit. M. J.*, 1913, i, 659.
- Acute ileus as a result of Meckel's diverticulum. A. MUGGIA. *Pediatrics, Napoli*, 1913, xxi, 44.
- A case of ileus, caused by obliteration of Meckel's diverticulum. BIEN. *Wien. med. Wchnschr.*, 1913, lxiii, No. 13.
- Intestinal occlusion caused by retrodeviation of a normal uterus. LEFÈVRE. *J. de méd. de Bordeaux*, 1913, xliii, No. 12.
- A case of intestinal occlusion caused by ascarides. W. RULAND. *Therap. d. Gegenw.*, 1913, liv, 119.
- Intestinal occlusion caused by biliary calculus. MOLLER. *Hosp.-Tid., Kjøbenhavn.*, 1913, lvi, Nos. 10-11.
- Post-operative intestinal occlusions. FRANCHINI. *Gaz. d. hosp. do Porto*, 1913, vii, No. 6.
- Intestinal occlusion; operation; recovery. VALVERDE. *Arch. Brasil. de med.*, 1912, ii, No. 6.
- Arterioenteric intestinal occlusion. K. BLOLAG. *Cor.-Bl. f. schweizer Ärzte*, 1913, xliii, 262.
- Congenital obliteration of the small intestine; arrest of development of the large intestine and of the terminal section of the small intestine. PERRIN. *Rev. d'orthop., Par.*, 1913, iv, No. 2.
- Paratyphoid bacillus associated with intestinal perforation. GRENIER. *Progrès méd., Par.*, 1913, xli, No. 9.
- Gangene of the intestines resulting from thrombosis of the mesentery vessels. LAUWERS. *Bull. Soc. l'émulation d. l'arrondissement d. Courtrai*, Sept. 1912.
- A case of anæmic infarct of the small intestine. W. R. MEYER. *Zentralbl. f. allg. Pathol. u. pathol. Anat.*, 1913, xxiv, 197.
- Primary cancer of the jejunum and ileum. CARLSON. *Hygiea, Stockholm*, 1913, lxxv, No. 2.
- Vegetative adenomata of the upper section of the small intestine simulating pyloric stenosis. HARTMANN. *Presse méd.*, 1913, xxi, No. 25.
- A case of cystoid pneumatosis of the intestines. W. MJASSNTKOFF. *Sibirische Ärzte-Ztg.*, 1913, viii, 86.
- Permeability of the intestinal walls to bacteria and the protective action of the epiploön. A. Poddighe. *Riforma med.*, 1913, xxix, 313.
- Post-operative treatment and post-operative complications of cœliotomies. PALM. *Gynäk. Rundschau*, 1913, vii, No. 6.
- When is operative treatment indicated in chronic dyspepsia? W. H. WATHEN. *J. Am. M. Ass.*, 1913, lx, 714.
- Sequelæ of constipation, including autointoxication. A. J. ZOBEL. *Proctologist*, 1913, vii, 1.
- A few important points in X-ray examination of the digestive tract. F. W. WHITE. *Boston M. & S. J.*, 1913, clxviii, 449.
- Alimentary toxæmia. WHITE, ANDREWS, SAUNDBY, LANE, HARLEY and COLYER. *Brit. M. J.*, 1913, i, 537. [27]
- The toxins of the alimentary canal. V. HARLEY. *Proc. Roy. Soc. Med.*, 1913, vi, 21.
- The consequences and treatment of alimentary toxæmia from a surgical point of view. W. ARBUTHNOT LANE. *Proc. Roy. Soc. Med.*, 1913, vi, 49.
- Newer teachings of diseases of the gastro-intestinal canal. M. I. KNAPP. *N. Y. M. J.*, 1913, xcvi, 437.
- Fluoroscopy of the gastro-intestinal canal. E. H. SKINNER. *Lancet-Clin.*, 1913, cix, 234.
- The technique of gastro-intestinal radiology and the results obtained with it. HESSE. *Ztschr. f. Röntgenkunde u. Radiumforsch.*, 1913, xv, No. 3.
- Post-operative gastro-enteric paresis. J. T. PILCHER. *Med. Rec.*, 1913, lxxxiii, 378.
- Mobilization of the cæcum by surgical method and comment on Kofmann's article, "The functional disconnection of the appendix." KRÜGER. *Zentralbl. f. Chir.*, 1913, lx, 85. [30]
- The insufficiency of a cæcal anus to assure a permanent opening for the large intestine in cases of occluding carcinoma of the rectum and the iliac flexure. H. MULLER. *Lyon chir.*, 1913, ix, 296. [30]
- A case of tubercular ulceration of the ileum and cæcum. M. F. PORTER. *J. Indiana St. M. Ass.*, 1913, vi, 113.
- Toward promotion of timely operation in perityphlitis; inquiry concerning the preparation of the field of operation. WAGNER. *Med. Klin.*, 1913, ix, No. 12.
- Left high dystopia of the cæcum associated with uncommon position of the appendix. W. TÜRSCHMID. *Nowiny lek.*, 1913, xxv, 69.
- Chronic appendicitis. KRECKE. *München. med. Wchnschr.*, 1913, lx, No. 11.
- Sensibility of the appendix. BIALOKUR. *Gaz. lek.*, 1913, xlviii, No. 10.
- Appendicitis from the gynecological point of view. NATVIG. *Norsk. Mag. f. lægevidensk.*, 1913, lxxiv, No. 3.
- Typhlitis and appendicitis. GONZALEZ. *Gaz. méd. d. Sur de Espana*, 1913, xxxi, 129.
- Perforating and gangrenous appendicitis; intervention of urgency; recovery. CABRERA. *Prensa med.*, 1913, iv, No. 2.
- Two cases of appendicitis with certain post-operative complications. J. L. LOHSE. *Calif. St. J. Med.*, 1913, xi, 112.
- Tardy hæmorrhages in appendicitis. HAUCH. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 2.
- Bastedo's sign: a new symptom of chronic appendicitis. A. F. HERTZ. *Lancet, Lond.*, 1913, clxxxiv, 816.
- Some observations on symptoms and treatment of suppurative appendicitis. R. T. LEGGE. *Calif. St. J. Med.*, 1913, xi, 124.
- Appendicitis or not appendicitis? HARRY A. SCHATZ. *N. Y. M. J.*, 1913, xcvi, 557.
- The differential diagnosis between pneumonia and appendicitis. G. F. BOEHME. *Med. Rec.*, 1913, lxxxiii, 567.

The appendix in the X-ray picture. M. COHN. *Deutsche med. Wchnschr.*, 1913, xxxix, 606. [30]

The medical treatment of appendicitis. R. ROBINSON. *Med. Rec.*, 1913, lxxxiii, 530.

Operative indications in appendicitis. KIRMISSON. *J. d. praticiens, Par.*, 1913, xxvii, No. 12.

Anæsthesia of the right iliac region for operation in chronic appendicitis. H. FOWELIN. *Zentralbl. f. Chir.*, 1913, xl, 342.

Exclusion of the vermiform appendix. STEINMANN. *Zentralbl. f. Chir.*, 1913, xl, No. 12.

Results of appendix ligation in rachitis. L. W. SSOBOLEW. *Arch. f. mikr. Anat.*, 1913, lxxxii, 377.

Removal of mucocoele of appendix. J. W. KENNEDY. *N. Y. M. J.*, 1913, xcvi, 602.

Cold subserous appendectomy. BRÉARD and VIGNARD. *Bull. méd., Par.*, 1913, xxvii, No. 22.

Appendicitis. A plea for immediate operation. E. OWEN. *Med. Press. & Circ.*, 1913, cxlvi, 223.

Ulcerative colitis: its etiology, diagnosis and treatment. KAPLAN. *Prag. med. Wchnschr.*, 1913, xxxviii, No. 10.

Diagnosis and treatment of dysenteric stenosis of the colon. MOTY. *Echo méd. du Nord*, 1913, xvii, No. 843.

Membranous pericolicitis and allied conditions of the ileocecal region. J. N. JACKSON. *Ann. Surg., Phila.*, 1913, lviii, 374. [31]

Membranous pericolicitis or Jackson's membrane. H. E. RANDALL. *J. Mich. St. M. Soc.*, 1913, xii, 159.

Membranous pericolicitis. LENORMANT. *Presse méd. Paris*, 1913, xxi, No. 20.

M-shaped colon. J. H. GUTMANN. *Albany M. Ann.*, 1913, xxxv, 147.

Contribution to study of the congenital megacolon. M. FAGO. *Gazz. d. osp. ed. clin., Milano*, 1913, xxxiv, 300. [31]

Foreign bodies in the intestine. A. M. RYBAK. *Ärzte-Ztg.*, 1913, xx, 347.

Treatment of chronic constipation. F. H. EDGEWORTH. *Bristol Med. Chir.*, 1913, xxxi, No. 119.

Empalement; wounds of the rectum and of the iliac sigmoid; laparotomy; recovery. BICHAT and JOB. *Rev. méd. de l'Est.*, 1913, xlv, No. 4.

Practical ingenious bandages for anal cases and for prolapse of the rectum. DECKER. *München. med. Wchnschr.*, 1913, lx, 700.

Primary melanin tumors of the rectum. CHALIER and BONNET. *Rev. de chir., Par.*, 1913, xxxiii, No. 3.

Carcinoma of the rectum. F. M. CAIRD. *Med. Press & Circ.*, 1913, cxlvi, 307.

Benign polyps of the rectum and of the iliac sigmoid. DECKER. *München. med. Wchnschr.*, 1913, lx, No. 11.

Immediate and remote results in combined operation for cancer of the rectum. CHALIER and PERRIN. *Lyon chir.*, 1913, ix, 150. [32]

Modifications of the combined method of the operation for cancer of the rectum. K. DAHLGREN. *Zentralbl. f. Chir.*, 1913, xl, 457.

Operations upon the rectum under local anæsthesia. J. F. SAPHIR. *Am. Med.*, 1913, xix, 106.

Fæcal fistula. J. B. DEEVER. *Therap. Gaz.*, 1913, xxxvii, 153. [32]

The injection treatment of hæmorrhoids. G. A. HUMPHREYS. *Am. J. Surg.*, 1913, xxvii, 96.

Excision of hæmorrhoids after Whitehead's method. HADDA. *Arch. f. klin. Chir.*, 1913, c, No. 4.

Liver, Pancreas and Spleen

A new procedure for the functional diagnosis of the liver. GHEDENI. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, No. 5.

Bradycardia in injuries of the liver. RUBASCHOW. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

Bradycardia in injuries of the liver. H. FINSTERRE. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 520.

Experimentally produced cirrhosis of the liver and pathogenesis of icterus, with special consideration of the bile capillaries under ligature of the common bile-duct and in interogen intoxication. T. OGATA. *Beitr. z. pathol. Anat. u. z. allg. Pathol.*, 1913, lv, 236.

A case of primary cancer of the liver in a nursing. MIYAKE. *Arch. f. klin. Chir.*, 1913, c, No. 4.

A case of alveolar hydatid cyst of the liver. DENIKÉ. *Kazan. med. J.*, 1912, xii, No. 4.

Multiple hydatid cysts of the liver. AUBERT and ROBIOLIS. *Marseille méd.*, 1913, l, No. 6.

An interesting case of abscess of the liver. CANTO. *Rev. med. de Yucatan*, 1913, viii, No. 4.

Dysenteric abscess of the liver; rupture into the bronchi; rapid cure by emetine. CHAUFFARD. *Bull. méd., Par.*, 1913, xxvii, No. 16.

New literature on surgery of the liver and of the gall-bladder. SEHRT. *Med. Klin.*, 1913, ix, No. 12.

Stones in the common duct of the liver. W. D. HAMILTON. *Ohio St. M. J.*, 1913, ix, 108.

The differential diagnosis of gall-bladder disease. A. B. KANAVEL. *Illinois M. J.*, 1913, xxiii, 287.

Morphologic changes in tissues with change in environment; changes in gall-bladder following autoplasmic transplantation into gastro-intestinal tract. M. SMITH. *J. Med. Research*, 1913, xxvii, No. 4. [33]

A case of voluminous congenital bilocular gall-bladder. TOIDA. *Arch. f. klin. Chir.*, 1913, c, No. 4.

Mucocoele of the gall-bladder. W. MCADAM ECCLES. *Clin. J.*, 1913, xli, 337.

Surgery of the gall-bladder. ADLER. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

Gall-stones. W. D. HAMILTON. *Lancet-Clin.*, 1913, cix, 309.

Cholelithiasis. N. F. LANE. *J. Am. Inst. Homeopathy*, 1913, v, 912.

Case of cholecystitis due to infection of the gall-bladder by the typhoid bacillus in a child three years old. H. LOWENBURG. *Arch. Pediatrics*, 1913, xxx, 212.

Difficulties in the diagnosis of gall-stones. F. E. BUNTS. *Cleveland M. J.*, 1913, xii, 177.

Clinical and experimental studies of cholecystectomy. L. D. VAN HENGEL. *Dissertation, Utrecht*, 1912. [34]

End-results of cases operated on for gall-stones. A. R. SHORT. *Bristol-Med.-Chir. J.*, 1913, xxxi, No. 119.

An ascaris in the hepatic duct; operative findings. HINTERSTOISSER. *Wien. klin. Wchnschr.*, 1913, xxvi, 456.

Ascariasis of the bile-ducts; consideration of a personally observed case. ROSENTHAL. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

Carcinoma of the ampulla of Vater. G. W. OUTERBRIDGE. *Ann. Surg., Phila.*, 1913, lviii, 402. [34]

Cancer of the ampulla of Vater. CLERMONT. *Rev. d. Gynec. et d. Chir. abdom.*, 1913, xx, 19.

Medicinal treatment of biliary lithiasis. PLICQUE. *Bull. méd., Par.*, 1913, xxvii, No. 17.

Biliary lithiasis and intestinal lithiasis. BINET. *Progrès méd., Par.*, 1913, xli, No. 11.

Transpancreatic choledocolithotomy; clinical and anatomical study. G. MORONE. *La Riforma med.*, 1913, xxix, 174.

The possibility of replacing the choledochus by implantation of the processus vermiformis. MOLINEUS. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 447. [35]

Regeneration of the cystic duct following insertion of a T tube. K. PROPPING. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 369. [35]

Pancreatic hæmorrhage. KNAPE. Deutsche Ztschr. f. Chir., 1913, cxxi, 471. [36]

Case of hæmorrhagic tumor of the pancreas. F. B. BISHOP. Va. M. Semi-Month., 1913, xvii, 617.

The mechanism of the external secretion of the pancreas. A. HUSTIN. J. méd. de Bruxelles, 1913, xviii, 120.

Cambridge's reaction and its diagnostic value in affections of the pancreas. LANGER. Wien. klin. Wchnschr., 1913, xxvi, No. 9.

The diagnosis of the functional activity of the pancreatic gland by means of ferment analyses of the duodenal contents and of the stools. B. B. CROHN. Am. J. M. Sc., 1913, cxlv, 393. [36]

Diagnosis of acute inflammation of the pancreas. NAGY. Wien. klin. Wchnschr., 1913, xxvi, No. 9.

A peripancreatic cyst which developed between the folia of the transverse mesocolon. ZUR VERTH and SCHEELE. Deutsche Ztschr. f. klin. Chir., 1913, cxxi, Nos. 3-4.

Pancreatic and peripancreatic lymphangitis. J. B. DEEVER and PFEIFFER. Tr. Am. Surg. Ass., 1913, May. [37]

Surgery of the pancreas. W. J. MAYO. Tr. Am. Surg. Ass., 1913, May. [37]

Hydatid cyst of the spleen. PIÉRI. Marseille méd., 1913, l, No. 6.

Experimental researches on the repair of injuries of the spleen by means of suture. GUASONI. Clin. chir., Milano, 1913, xxi, No. 2.

Thrombosis of the splenic vein associated with fatal gastric hæmorrhage. EWALD. Deutsche med. Wchnschr., 1913, xxxix, No. 9.

The effect of X-rays on the normal spleen. A. MUZI. Giorn. internaz. d. sc. med., 1913, xxxv, 165.

Pancreatic transplantations in the spleen. J. H. PRATT and F. T. MURPHY. J. Exp. M., 1913, xvii, 252. [38]

Clinical observations concerning twenty-seven cases of splenectomy. H. Z. GIFFIN. Lancet-Clin., 1913, cix, 284.

Miscellaneous

The diagnosis of acute abdominal conditions in children. EDMUND CAUTLEY. Med. Press & Circ., 1913, cxlvi, 254.

An acute abdomen. F. Y. KENNY. Austral. M. Gaz., 1913, xxxiii, 231.

Relation between blood pressure and the prognosis in abdominal operations. G. W. CRILE. Tr. Am. Gynec. Ass., 1913, May. [38]

A case of situs viscerum inversus. WOLKOWA. Pediatra, 1913, iv, 134.

Pathogenesis and clinical manifestation of prolapse of the viscera. CLEARCO PIAZZA. Gazz. internaz. di med. chir., 1913, i, 200.

A case of complete visceral inversion. KROKIEVICZ. Arch. f. pathol. Anat. u. Physiol. u. f. klin. Med., 1913, cxxi, No. 3.

A case of acute diffuse sarcomatosis (atypical lymphocytomatosis) of the viscera (stomach, intestine, kidney, etc.) and of the meninges. MOSNY and MOUTIER. Arch. de méd. expér. et d'anat. pathol., Par., 1913, xxv, No. 2.

Laparo and thoracoscopy. H. C. JACOBÆUS. Beitr. z. Klin. d. Tuberk., 1913, xxv, No. 2.

Technique of and indications for laparoscopy. RENON. J. d. praticiens, Paris, 1913, xxvii, No. 10.

Subcutaneous emphysema after laparotomies. GERGO. Deutsche Ztschr. f. Chir., 1913, cxxi, Nos. 3-4.

SURGERY OF EXTREMITIES

Diseases of Bones, Joints, etc.

The growth, the death and the regeneration of bone. H. G. WETHERILL. J. Am. M. Ass., 1913, lx, 983. [39]

The relation of trauma to bone tuberculosis. WILSON and ROSENBERGER. Tr. Am. Orthop. Soc., 1913, May. [39]

An experimental study of bone and joint tuberculosis. J. FRASER. J. Exp. M., 1913, xvii, 362. [39]

Heliotherapy (of Rollier) as an adjunct in the treatment of bone disease. HAMMOND. Tr. Am. Orthop. Soc., 1913, May. [41]

Etiology and therapy of osteomalacia and rachitis. STOCKER. Cor.-bl. f. schweizer Ärzte, 1913, xliii, 257. [41]

Osteomyelitis in early childhood. KIRMISSON. Bull. méd., Par., 1913, xxvii, No. 21.

Some rare forms of osteomyelitis. M. FASANO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 364.

Osteomyelitis of the tibia; transplantation of a ten-inch segment of bone from opposite tibia. J. B. MURPHY. Surg. Clin. J. B. Murphy, 1913, ii, No. 2. [41]

Two cases of Paget's disease of bones; etiological considerations. ESMEIN. Progrès méd., Par., 1913, xli, No. 13.

Rachitis in the new-born. M. KASSOWITZ. Jahrb. f. Kinderh., 1913, lxxvii, 277. [42]

Periosteal round-celled sarcoma of the femur involving two thirds of the shaft with extensive multiple metastasis. COLEY. Tr. Am. Surg. Ass., 1913, May. [42]

Osteosarcoma of the lower extremity of the femur; amputation of the thigh. TOURNEUX and GINESTY. Toulouse méd., 1913, xv, No. 5.

Multiple plasma cytoma of the bone, also a contribution on myelomata. G. WARSTAT. Beitr. z. path. Anat. u. allg. Path., 1913, lv, 225.

Osseous cysts. PEREZ. Policlin., Roma, 1913, xx, No. 3.

Abscesses of the tibia. POTHERAT. Clinique, Par., 1913, viii, No. 12.

Injuries of the joints by projectiles. L. SCHLIEP. Deutsche med. Wchnschr., 1913, xxxix, 600.

A collection of facts, ideas, and theories relating to the diverse elements that contribute to success in treatment of joint diseases. H. W. MARSHALL. Boston M. & S. J., 1913, clxviii, 333, 385 and 425. [43]

Diseases and joints and bone marrow. L. W. ELY. Am. J. Surg., 1913, xxvii, 81.

Inflammatory affections of the joints which are important from the point of view of practice (rheumatic arthritis, gonorrhœic arthritis, and gout.) PASSLER. Klin.-therap. Wchnschr., 1913, xx, Nos. 9-10.

Diagnosis and treatment of affections and deformities of the hip-joint. M. HAUDEK. Wien. med. Wchnschr., 1913, lxiii, 698, 754.

Chronic arthritis and tuberculous rheumatism. PONCET. Presse méd., Par., 1913, xxi, No. 25.

Arthritis deformans. J. C. RUSHMORE. Long Island M. J., 1913, vii, 109.

The nature of arthritis deformans. AXHAUSEN. Berl. klin. Wchnschr., 1913, l, 298.

The treatment of gonorrhœal arthritis by arthigon. F. TEDESKO. Wien. med. Wchnschr., 1913, lxiii, 635.

The treatment of tuberculosis of the joints. BIER. Deutscher chir. Kong., 1913. [44]

Tabetic arthropathies and spontaneous fractures. A. BLENCCKE. *Fortschr. d. Med.*, 1913, xiii, 309.

The influence of the insufficiency and of the atrophy of the thyroid body on articular affections. GAGEN-TORN. *Chir. Arch. Veliaminova, St. Petersburg*, 1913, xxix, No. 1.

So-called typical laceration of the biceps. LINIGER. *Ztschr. f. Versicherungsmed.*, 1913, vi, 65.

Rupture of the musculus rectus femoris. VOGEL. *Wien. med. Wchnschr.*, 1913, lxiii, No. 13.

Ossifying myositis. CHAIKISSE. *Vrach. gaz.*, St. Petersburg, 1913, xx, No. 8.

Myositis ossificans traumatica. W. B. COLEY. *Ann. Surg., Phila.*, 1913, lvii, 395. [44]

Endothelioma of the bursa serosa of the musculus popliteus. PETRIVALSKY. *Cas. lék. česk.*, Prague, 1913, lii, No. 8.

Chronic trochanteric bursitis. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 2. [44]

Hygroma of the serous bursa of the ilio psoas. PISANO. *Policlin.*, Roma, 1913, xx, No. 12.

Regeneration of the tendons. M. S. HENDERSON. *J. Lancet*, 1913, xxxiii, 175. [45]

Infection of the hands in surgery. APERLO. *Clin. chir.*, Milano, 1913, xvi, No. 2.

The location of pus in the hand. A. A. MCCONNELL. *Med. Press & Circ.*, 1913, cxlvi, 328.

Was fibroma of the dorsal surface of the hand a condition secondary to an injury? DUCASTAING. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 30.

Epithelial cysts of the fingers and of the wrist. ROSOFF. *Chir. Arch. Veliaminova, St. Petersburg*, 1913, xxix, No. 1.

Treatment of synovial cysts of the wrist by injections of tincture of iodine. PAKOWSKI. *Progrès. méd.*, Par., 1913, xli, No. 10.

The causes of tumors of the foot. WINKLER. *Ztschr. f. Röntgenk. u. Radiumforsch.*, 1913, xv, No. 2.

Fractures and Dislocations

Some points of interest regarding long bone fractures. A. ALDRIDGE MATTHEWS. *Northwest Med.*, 1913, v, 63.

The callus to give strength to the radius and the fibula. TOUSSAINT. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

Treatment of fractures. J. C. LANDENBERGER. *Northwest Med.*, 1913, v, 59.

Old and new methods in the treatment of fractures. TURNER. *Chir. Arch. Veliaminova, St. Petersburg*, 1913, xxix, No. 1.

Treatment of compound fractures. C. BLICKENS-DERFER. *Med. Herald*, 1913, xxxii, 101.

A case of multiple spontaneous fractures of a special form; Lobstein's disease. FLISSON. *Clinique, Par.*, 1913, viii, No. 9.

Fracture of the tuberculous major humerus. JURCIC. *Lijecniki Vijesnik, Agram*, 1913, xxv, No. 2.

Diagnosis and treatment of fractures near the elbow. VOECKLER. *Med. Klin.*, 1913, ix, No. 12.

Some cases of supra-condilar fracture of the elbow in childhood. HENDRIX. *Policlin.*, Bruxelles, 1913, xxii, No. 5.

Should the fractures of the lower extremity of the radius be reduced? CERNÉ. *Normandie méd.*, 1913, xxix, No. 5.

Separation of the epiphyses of the metacarpales. GASNE. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

The treatment of fractures of the neck and femur. I. COHN. *New Orleans M. & S. J.*, 1913, lxxv, 659.

Treatment of fractures of the patella. LEJARS. *Semaine méd.*, Par., 1913, xxxiii, No. 11.

Treatment of superior marginal fractures of the tibia. VILLANDRE. *Paris chir.*, 1912, iv, No. 10.

More fractures of the ankle. CHAPUT. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

The third malleolus; posterior marginal fracture. DESTOT. *Lyon chir.*, 1913, ix, No. 3.

Fracture of the posterior apophysis of the astragalus. WILLE. *Norsk. Mag. f. Laegevidensk.*, Christiania, 1913, lxxiv, No. 3.

Central dislocation of the femur. BRIND. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, Nos. 1-2.

Snapping hip. J. F. BINNIE. *Tr. Am. Surg. Ass.*, 1913, May. [45]

Luxations of the knee-joint. HERING. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 2.

Luxations of the semi-lunar cartilage. SEVEREANO. *Gaz. med.*, Bucuresci, 1913, ii, No. 17.

Luxations of the wrist. MOSTI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 407.

Hyperextension and "backfire" injuries of the wrist. C. S. WALLACE. *Lancet, Lond.*, 1913, clxxxiv, 819.

Detachment of the extensor tendon at the phalanges. BESSON and LEPLUS. *J. d. sc. Méd. de Lille*, 1913, xxxvi, No. 9.

Surgery of the Bones, Joints, etc.

Open treatment for fractures. GIACQUINTA. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 2.

Some phases in the treatment of fractures. W. D. HAINES. *Internat. J. Surg.*, 1913, xxvi, 78.

Ununited fracture treated twice unsuccessfully by the Lane plate method and successfully by insertion of a tibial bone. THOS. W. HUNTINGTON. *Northwest Med.*, 1913, v, 68.

A new method of bone synthetism. MUZI. *Rev. osp.*, Roma, 1913, ii, No. 4.

Replacement of finger and toe phalanges. W. GOEBEL. *München. med. Wchnschr.*, 1913, lx, 356.

Resection of the elbow-joint; report of a case. HANCOCK. *Internat. J. Surg.*, 1913, xxvi, 98.

Treatment of internal injuries of the knee-joint. VULPIUS. *München. med. Wchnschr.*, 1913, lx, No. 9.

Resection of the leg; a method of excising the knee-joint when the latter is extensively involved. N. A. BOGORAS. *Ärzte-Zeit.*, 1913, xx, 3. [46]

Indications for arthrodesia. W. BOCKER. *Deutsche med. Wchnschr.*, 1913, xxxix, 458.

Arthrodesis of the hip-joint. O. VULPIUS. *München. med. Wchnschr.*, 1913, lx, 691.

A case of gangrene of the leg in an infant 11 days old; amputation; recovery. D. C. L. FITZWILLIAMS. *Lancet, Lond.*, 1913, clxxxiv, 753.

Primary muscular sarcoma and myomectomy. FASANO. *Policlin.*, Roma, 1913, xxc, 86.

Aponeurotic graft in congenital absence of the musculus trapezius. CRAMER. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, Nos. 1-2.

The treatment of paralysis and deformities following infantile paralysis. F. G. GAENSLEN. *Wis. M. J.*, 1913, xi, 307.

Transplantation of tendons in infantile paralysis of the lower extremities. A. MARTINEZ. *Rev. ibero-americana de ciens. med.*, 1913, xxix, 73.

Tendon fixation. W. E. GALLIE. *Ann. Surg., Phila.*, 1913, lvii, 427. [46]

A new method in the operative treatment of ischæmic contractures. HORWITZ. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

ORTHOPEDIC SURGERY

Diseases and Deformities of the Spine

The history of scoliosis. R. W. LOVETT. *Tr. Am. Orthop. Ass.*, 1913, May. [47]

Congenital scoliosis. LEWY. *Deutsche med. Wchnschr.* 1913, xxxix, No. 12.

Scoliosis in life and in medical practice. GOTTSTEIN. *Prag. med. Wchnschr.*, 1913, xxxviii, No. 11.

Scoliosis — its prognosis. J. L. PORTER. *Tr. Am. Orthop. Ass.*, 1913, May. [47]

Some recent advances in the treatment of scoliosis. E. M. LITTLE. *Clin. J.*, 1913, xli, 369. [47]

The rotation treatment of scoliosis. A. M. FORBES. *Tr. Am. Orthop. Ass.*, 1913, May. [48]

Utilization of the respiratory pressure in the treatment of scoliosis. SPITZY. *München. med. Wchnschr.*, 1913, lx, No. 11.

Corrective jackets in the treatment of structural scoliosis; with especial reference to mensuration and record. A. H. FREIBERG. *Tr. Am. Orthop. Ass.*, 1913, May. [48]

What to do after corrective jackets are discarded. BRADFORD. *Tr. Am. Orthop. Soc.*, 1913, May. [48]

An introduction to the symposium on lateral curvature. COOK. *Tr. Am. Orthop. Soc.*, 1913, May. [48]

Movements or positions of the normal spine and their relation to lateral curvature. E. G. ABBOTT. *Tr. Am. Orthop. Ass.*, 1913, May. [49]

A consideration of the correction of the fixed types of lateral curvature complicated by visceral derangements, especially those of the cardiac variety, with a slight modification of Abbott's method. R. MEISENBACH. *Tr. Am. Orthop. Ass.*, 1913, May. [49]

Results obtained by new methods of corrections of the spinal column in orthostatic albuminuria. JEHL. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 9.

A report of fourteen cases of spina bifida and one of sacrococcygeal tumor. ROSWELL PARK. *Buffalo M. J.*, 1913, lxviii, 437. [49]

Two cases of spina bifida. ZALEWSKAPLOSKA. *Beitr. z. pathol. Anat. u. z. allg. Pathol.*, 1913, lv, No. 3.

Two unusual forms of spina bifida. GEO. H. EDINGTON. *Glasgow M. J.*, 1913, lxxix, 161.

Meningocele and spina bifida. CARRIÈRE. *Paris méd.*, 1913, ii, No. 14.

A case of congenital fissure of the vertebra, stomach, bladder, genitals, and the intestines associated with doubling of the cæcum and the appendix. LÄWEN. *Beitr. z. pathol. Anat. u. z. allg. Pathol.*, 1913, cv, 575.

A case of laminectomy for tuberculous spondylitis associated with paraplegia. PORCILE. *Policlin.*, Roma, 1913, xx, No. 9.

Coxitis tuberculosa. SCHLEE. *Med. Klin.*, 1913, ix, No. 9.

Pathology of typhoid spine. M. H. ROGERS. *Boston M. & S. J.*, 1913, clxviii, 348.

Carcinosarcoma of the sacrum. DEBERNARDI. *Gior. d. r. Accad. di med. di Torino*, 1912, lxxv, No. 12.

An enormous hard sacro-coccygeal tumor. ARFANIS. *Paris méd.*, 1913, ii, No. 14.

Paraplegia in Hodgkin's disease — treatment by laminectomy and the Röntgen rays. CHAS. K. MILLS and EDWARD MARTIN. *Penn. M. J.*, 1913, xvi, 429.

An injury by a projectile which penetrated the thorax and the vertebral canal, associated with compression of the

spinal cord and Brown-Sequard's syndrome; osteoplastic laminectomy and extraction of the projectile; recovery. *DE FABII. Rev. osp.*, Roma, 1913, ii, No. 5.

Anatomical researches on the lumbar vertebræ of neolithic man. HUE and BAUDOUIN. *Arch. prov. de chir.*, Par., 1913, xxii, No. 2.

Technical difficulties in the puncture of the sacral canal of rachitic pelvis. RÜBSAMEN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 378.

Semiology of the cerebrospinal fluid. RATHERY. *Ann. de méd. et chir. infant.*, 1913, xvii, 165.

Successful removal of an intradural tumor from the spinal canal. L. NEWMARK and H. M. SHERMAN. *Calif. St. J. Med.*, 1913, xi, 103.

On two cases of tumor of the spinal cord. SATO. *Sei-i Kwai M. J.*, 1913, xxxii, No. 2.

Giant tumors of the conus and cauda equina. COLLINS and ELSBERG. *Tr. Am. Neurol. Ass.*, 1913, May. [50]

A very large multilobular fibroma of the cervical cord. MERZBACHER and CASTEX. *Deutsche Ztschr. f. Nervenhe.*, Leipzig, 1913, xlvii, No. 2.

Brown-Sequard's syndrome. CEDRANGOLO. *Riforma med.*, Napoli, 1913, xxix, Nos. 10, 11, 12.

Traumatic lesions of the spinal cord. A. WIMMER. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 1913, xv, 292.

The present state and the future of surgery of the spinal cord. ROTHMANN. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

Malformations and Deformities

Trigger-finger. H. RAY. *Hosp. Bull. Univ. Md.*, 1913, ix, 11.

A case of supernumerary fingers. T. L. BLACKBURN. *South African M. Rec.*, 1913, xi, 103.

A combination of congenital luxation of the head of the radius with Little's disease. B. KUNNE. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 138. [50]

A case of hallux varus. HOLLENSSEN. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

Congenital hypertrophy of the right lower limb. TRIDON. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

Flat-foot. CRAMER. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, Nos. 1-2.

The etiology of flat-foot. C. GHILLINI. *Policlin.*, Roma, 1913, xx, 21.

Statistics of flat-foot. MALICE. *Vrach. gaz.*, St. Petersburg, 1913, xx, No. 8.

The static flat-foot. N. M. MALIS. *Arzte-Ztg.*, 1913, xx, 279.

The treatment of flat-foot. DE FOREST P. WILLARD. *Penn. M. J.*, 1913, xvi, 437. [50]

The prevention of foot strain. ROBERT B. OSGOOD. *Boston M. & S. J.*, 1913, clxviii, 380. [51]

The madura foot. R. E. CICERO. *Gaz. med. d. Sur de España*, 1913, xxxi, 113.

Deformities of the toes considered from the point of view of their pathogenesis. KIRMISSON. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

Two cases of supernumerary toes. GEBHARDT. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, Nos. 1-2.

Congenital hypertrophy of the first and second toes. RENDU and LOAEC. *Rev. d'orthop.*, Par., 1913, iv, No. 2.

Plaster-of-Paris casts. E. S. GEIST. *J.-Lancet*, 1913, xxxiii, 138.

SURGERY OF NERVOUS SYSTEM

Injuries of the radial nerve in the fore-arm. M. BERNHARDT. *Neurol. Zentralbl.*, 1913, xxxii, 339.

Experimental study of intraneural injections of alcohol. GORDON. *Tr. Am. Neurol. Ass.*, 1913, May. [51]

Histopathology of neuritis with special consideration of regenerative processes. B. DOINIKOW. *Deutsche Ztschr. f. Nervenheilk.*, 1913, xlv, 20.

A case of polyneuritis of the lower limbs after a profuse hæmorrhage and prolonged elevation of the limbs. DUHOT, PIERRET and VERHAEGHE. *Arch. gén. de Chir., Par.*, 1913, vii, No. 2.

A case of Recklinghausen's disease associated with hypernephroma. SAALMANN. *Arch. f. pathol. Anat. u. physiol. u. f. klin. Med.*, 1913, ccxi, No. 3.

Recognition of members of the somatic motor chain of nerve cells by means of a fundamental type of cell structure, and the distribution of such cells in certain regions of the mammalian brain. EDW. F. MALONE. *Anat. Rec.*, 1913, vii, 67. [51]

Hyperexcitability of nerves in tetany. W. G. MACCALLUM. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxv, 963. [52]

The radiotherapeutic treatment of sciatica. DELHERM and PY. *Arch. Rönt. Ray*, 1913, xvii, 388. [52]

End-result of operation for brachial paralysis. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 2. [52]

The operation of Franke. SAUVÉ and TINEL. *J. de chir., Par.*, 1913, x, 129. [53]

Operative treatment of lues of the central nervous system. S. SCHOENHORN. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, 425.

A case of spastic paraplegia with dorsal root section for pain and spasticity. L. KAUFMAN and P. LE BRETON. *J. Am. M. Ass.*, 1913, lx, 981.

Franke's operation and Foerster's operation in visceral crises of tabes. LERICHE. *Lyon chir.*, 1913, ix, No. 3.

Spinal operations in tabetic subjects. SICARD. *Lyon chir.*, 1913, lx, No. 3.

DISEASES AND SURGERY OF THE SKIN AND APPENDAGES

Surgical care of the skin. RIGGLES. *Va. M. Semi-Month.*, 1913, xvii, 615.

Free plastic surgery of the fascia lata. LUCAS. *Arch. f. klin. Chir.*, 1913, c, No. 4.

Free fascia transplantation; experimental and clinical investigations. P. KORNEFF. *Dissertation, St. Petersburg.*, 1913. [56]

Free aponeurotic grafts. PERIMOFF. *Kazan. med. J.*, 1913, xii, No. 4.

The grafting of preserved amniotic membrane to burned and ulcerated surfaces substituting skin grafts. M. STERN. *J. Am. M. Ass.*, 1913, lx, 973. [57]

Latent erysipelas. SEMENOW BLUMENFELD. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 10.

Copper in the treatment of cutaneous tuberculosis. A. STRAUSS. *Deutsche med. Wchnschr.*, 1913, xxxix, 503. [58]

Multiple calcification ("Calcinosis") in subcutaneous tissue. E. P. WEBER. *Brit. J. Children's Dis.*, 1913, x, No. 111.

A case of cutaneous horn. CARLO. *Clin. chir., Milano*, 1913, xxi, No. 2.

Some rare complications associated with furuncles. FISCHER. *Pest. med.-chir. Presse*, 1913, xlix, No. 10.

Epithelial tumors of the sweat glands. GIANI. *Clin. chir., Milano*, 1913, xxi, No. 2.

X-ray treatment of cutaneous epitheliomata. G. SCADUTO. *Policlin., Roma*, 1913, xx, 289.

Massive dose X-ray treatment of cutaneous epithelioma. G. M. MACKEE and J. REMER. *N. Y. M. J.*, 1913, xcvi, 633. [57]

Multiple primary carcinoid of the skin in an infant. W. HUTCHINSON. *J. Cutan. Dis.*, 1913, xxxi, 160.

A case of ossifying chondroma of the skin. MAX STRASSBERG. *Arch. f. Dermatol. u. Syphilis*, 1913, cxvi, 193.

The treatment of ulcer of the thigh by zinc-gelatin (Unna's bandage). VOGEL. *Ugesk. f. Laeger, Kjøbenh.*, 1913, lxxv, No. 13.

Treatment of chronic ulcers of the leg, with special reference to symptomatology and diagnosis. E. ADAMS. *Internat. J. Surg.*, 1913, xxvi, 85.

Congenital nævi. JNO. H. CARMAN. *Pediatrics*, 1913, xxv, 147.

The cure of vascular nævi by radium. BAYET. *Scalpel et Liège méd.*, 1913, lxx, No. 38.

Electrical operative treatments for diseases of the skin and mucous membrane. W. KNOWSLEY SIBLEY. *Practitioner, Lond.*, 1913, xc, 611.

Surgical aspects of purpura. J. F. MITCHELL. *Tr. Am. Surg. Ass.*, 1913, May. [58]

The treatment of chronic X-ray ulcerations. JOSEPH DEUTSCH. *Arch. f. physikal. Med. u. med. Techn.*, 1913, vii, 179.

Diagnosis and treatment of gangrene of the foot. L. MOSZKOWICZ. *Zentralbl. f. Chir.*, 1913, xl, 507.

Treatment of beginning gangrene. M. BORCHARDT. *Zentralbl. f. Chir.*, 1913, xl, 297.

Treatment of spontaneous gangrene of the extremities. KOGA. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 3-4.

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

Recent investigation on tumors. M. LISSAUER. *Med. Klin.*, 1913, ix, 420.

The influence of lecithin and cholesterol upon the growth of tumors. T. B. ROBERTSON and T. C. BURNETT. *J. Exp. M.*, 1913, xvii, 344. [58]

Inheritance of predisposition for tumors. MORPURGO and DONATI. *München. med. Wchnschr.*, 1913, lx, No. 12.

The formation of tumors in cold blooded animals. CARL. *Med. Klin.*, 1913, ix, No. 12.

Transplantation of tumors in animals with spontaneously developed tumors. FLEISHER and LOEB. *Tr. Am. Ass. Pathol. & Bacteriol.*, 1913, May. [58]

The nature of malignant tumors. A. G. BRENIZER. *Old Dominion J.*, 1913, xvi, 97.

Family incidence of malignant tumors. G. L. ROHDENBURG. *N. Y. M. J.*, 1913, xcvi, 443.

Heredity with reference to carcinoma as shown by the study of the cases examined in the pathological laboratory of the University of Michigan during 1895-1913. A. S. WARTHIN. *Tr. Ass. Am. Physicians*, 1913, May, [59]

Another hypothesis as to the origin and prevention of cancer. A. F. A. KING. *Wash. M. Ann.*, 1913, xii, 73.

The mechanism of metastasis formation in cancer. I. LEVIN. *Tr. Am. Ass. Pathol. & Bacteriol.*, 1913, May, [60]

Cancer from a clinical standpoint, some peculiar observations. M. B. HUTCHINS. *Atlanta J.-Rec. Med.*, 1913, lix, 599.

Cancer and its cure. J. C. BATESON. *Therap. Rec.*, 1913, viii, 92.

The curability of cancer and the need of educating lay people and doctors in the necessity of early recognition. L. BROWN. *Bull. Lying-In Hosp.*, 1913, ix, 40.

Cancer in the days of the ancient Greeks. F. M. LOOMIS. *Phys. & Surg.*, 1913, xxxv, 120.

The etiology of malignant granuloma. E. DE NEGRI and C. W. G. MIEREMET. *Zentralbl. f. Bakteriologie*, 1913, lxviii, 292.

Two cases of multiple neuro-fibrosarcomatosis. MAGNI. *Policlin.*, Roma, 1913, xx, No. 3.

Dermoid tumors. SCHWARZBACH. *Deutsche med. Wchnschr.*, 1913, xxxix, 676.

Lymphoma. HEDINGER. *Rev. suisse de méd.*, Berne, 1913, xiii, No. 11.

Inflammatory tuberculosis and psoriasis. G. PETGES and DESQUEYROUX. *Ann. de dermatol. et de syphiligr.*, 1913, iv, 129.

Boeck's sarcoid in diffuse generalized tuberculosis. G. STUMPKE. *Dermatol. Ztschr.*, 1913, xx, 199.

Inflammatory tuberculosis; its surgical manifestations. COTTE and ALAMARTINE. *Rev. de chir.*, Par., 1913, xxxiii, No. 3.

Sporotrichosis. R. DE VEGA. *Gac. méd. d. Sur. de España*, 1913, xxxi, 73.

A case of gummous sporotrichosis. DANIEL. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 8.

Sporotrichosis of a disseminated gummous form. AZEMA and BASSAL. *Toulouse méd.*, 1913, xv, No. 5.

Sporotrichosis from the surgical point of view. GORSE. *Arch. de méd. et de pharm. mil.*, Par., 1913, lxi, No. 3.

A case of fungoid mycosis. G. VERROTTI. *Giorn. ital. d. mal. veneree e d. pelle.*, 1913, liv, 99.

Internal anthrax as a condition secondary to accidents. LEWIN. *Med. Klin.*, 1913, ix, No. 9.

A case of hydrophobia. C. Y. WHITE and J. REICHEL. *J. Am. M. Ass.*, 1913, lx, 990.

The significance of the cellular inclusions of Döhle. SCHIPPERS and DE LANGE. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

Some interesting cases of traumatism. MANTEGAZZA. *Clin. chir.*, Milano, 1913, xxi, No. 2.

Studies on the effect of aseptic surgical tissue necrosis and researches on the causes of death from burns. HEYDE and VOGT. *Ztschr. f. d. ges. exp. Med.*, 1913, i, 59. [60]

The diagnosis and treatment of border-line pathological lesions. J. C. BLOODGOOD. *Tr. Am. Surg. Ass.*, 1913, May, [61]

Shock, history and physiology. A. W. COLCORD. *Internat. J. Surg.*, 1913, xxvi, 91.

Sera, Vaccines and Ferments

Serodiagnosis of cancer. STERLING. *Med. i kron. lek.*, Warsaw, 1913, lxviii, Nos. 9-10-11.

Contribution to the serum diagnosis of tumors. E. LESCHKE. *Beitr. z. Klin. d. Infektionskr. u. z. Immunitätsforsch.*, 1913, i, 271. [62]

Sero diagnosis of tumors by the complement fixation test of Von Dungren. J. LINDENSCHAEFF. *Deutsche med. Wchnschr.*, 1913, xxxviii, 2175.

The principles of serum therapy. I. BATTLE. *Old Dominion J.*, 1913, xvi, 119.

Specific activity of tuberculous serum by mixing tuberculin and serum. A. SATE. *Ztschr. f. Immunitätsforsch.*, 1913, xvii, 84.

Results with tuberculin (Dixon's) in advanced chronic ambulatory tuberculosis. A. P. FRANCINE and H. J. HARTZ. *J. Am. M. Ass.*, 1913, lx, 717.

Serum and ferment effects in pregnant and tumorous subjects. P. LINDIG. *München. med. Wchnschr.*, 1913, lx, 702.

A case of woody phlegmon treated by Aronson's anti-streptococci serum. THEEDINGA. *Med. Klin.*, 1913, ix, No. 9.

Serum and vaccine therapy at the ninth Australasian Medical Congress. D. A. WELSH. *Austral. M. Gaz.*, 1913, xxxiii, 253.

What is the value of the prophylactic serotherapy of tetanus? KOLB and LAUBENHEIMER. *München. med. Wchnschr.*, 1913, lx, No. 9.

The employment of simple animal serum in surgery. NOHLIA. *Presse méd.*, Par., 1913, xxi, No. 20.

Recent work on vaccine treatment. A. FLEMING. *Practitioner*, Lond., 1913, xc, 591.

The vaccine treatment of septic infections. GEO. R. SOUTHWICK. *J. Am. Inst. Homeopathy*, 1913, v, 921.

The treatment of erysipelas in infants by means of vaccines. E. M. SILL. *Med. Rec.*, 1913, lxxxiii, 573.

Anaphylaxis. W. D. SUTHERLAND. *Indian M. Gaz.*, 1913, xlviii, 92.

Anaphylaxis. HANS MUCH. *Fortschr. d. Med.*, 1913, xxxi, 141.

Nature of anaphylaxis and relations between anaphylaxis and immunity. R. WEIL. *J. Med. Research*, 1913, xxvii, No. 4. [62]

Cardiac disturbances in the dog during anaphylaxis. ROBINSON and AUER. *Tr. Ass. Am. Physicians*, 1913, May, [63]

Blood

Experimental study on the constituents of blood and bile coloring materials. H. FISCHER and E. BARTHOLOMAUS. *Ztschr. f. physiol. Chem.*, 1913, lxxxiii, 50.

Experimental investigations on the action of iodoform and iodine on the blood. W. WEIL. *Ztschr. f. Chemotherapie*, 1913, i, 412.

The relation of phenolsulphonaphthalein excretion to the urea content of the blood. J. H. AGNEW. *Phys. & Surg.*, 1913, xxxv, 117.

The lipid chemistry of the blood. L. production of cholesterolin, cholesteroline esters and lecithin in the serum. BURGER and BEUMER. *Berl. klin. Wchnschr.*, 1913, l, 112.

Mucous channels and the blood stream as alternative routes of infection. C. J. BOND. *Brit. M. J.*, 1913, i, 645. [63]

The blood in cancer with bone metastases. G. R. WARD. *Lancet*, Lond., 1913, clxxxiv, 676.

The metamorphosis of the white blood corpuscle. T. POWELL. *N. Y. M. J.*, 1913, xcvi, 494.

The value of differential leucocyte counts and new chart for reducing the same. U. HELMUTH. *New Eng. M. Gaz.*, 1913, xlviii, 113.

Leukocytic inclusions of Döhle. W. T. CUMMINS. *J. Med. Research*, 1913, xxvii, No. 4. [64]

The lymphocytosis of infection. R. C. CABOT. *Am. J. M. Sc.*, 1913, cxlv, 335. [65]

Anæmia as an operative risk. HENRY T. BYFORD. *Tr. Am. Gynec. Soc.*, 1913, May. [65]

Operations on patients with a hæmoglobin of 40 per cent or less. T. S. CULLEN. *Tr. Am. Gynec. Ass.*, 1913, May. [66]

Characteristics of hæmoglobins. F. MULLER. *Folia hæmatol.*, 1913, xiv, 251.

The influence of lipoids on hemolysis. J. D. PILCHER. *Cleveland M. J.*, 1913, xii, 182.

Some observations on hæmophilia with report of three cases. J. E. GILCREEST. *Tex. St. J. M.*, 1913, viii, 302.

The arrest of hæmorrhage from bone by plugging with soft tissues. G. T. VAUGHAN. *Ann. Surg., Phila.*, 1913, lvii, 434.

Arresting of hæmorrhage in operation. C. C. TOLLISON. *Hosp. Bull. Univ. Md.*, 1913, ix, 10.

Modern methods of hæmostasis. BLÜHDORN. *Med. Klin.*, 1913, ix, No. 11.

Definitive hæmostasis in resection of the parenchymatous organs. G. CAPONETTO. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, 377.

Current methods of hæmostasis in injury of the large arteries by projectiles. DUFOUCH. *Arch. de Méd. et de Pharm. mil., Par.*, 1913, lxi, No. 2.

Hæmorrhage controlled in two cases by local application of horse-serum. C. G. LEVISON. *J. Am. M. Ass.*, 1913, lx, 721.

The treatment of hæmorrhagic conditions by injections of serum. A. GISMONDI. *Pediatrics, Napoli*, 1913, xxi, 55.

Report of death from internal hæmorrhage with unusual findings at autopsy. L. H. GILLETTE. *Vt. M. Month.*, 1913, xix, 59.

Blood coagulation tests in carcinoma and sarcoma. B. JAFFÉ. *Folia hæmatol. Arch.*, 1913, xv, 167.

Development and origin of toxic thrombosis and its significance. S. KUSAMA. *Beitr. z. pathol. Anat. u. z. allg. Pathol.*, 1913, lv, 459.

Thromboplastic action is general and common to all substances introduced into the blood. H. DE WAELE. *Ztschr. f. Immunitätsforsch. u. exp. Therap.*, 1913, xvii, 314.

Thrombosis and embolism following operation and childbirth. B. R. SCHENCK. *Tr. Am. Gynec. Ass.*, 1913, May. [66]

The mechanics of embolism. R. GEIGEL. *Arch. f. pathol. Anat. u. Physiol.*, 1913, ccxi, 455.

Embolisms of the parenchyma embolism of the coronary artery of the heart by cerebellar tissue in the new-born. A. J. ABRIKOSSOFF. *Zentralbl. f. allg. Pathol. u. pathol. Anat.*, 1913, xxiv, 244.

Principals, technique and results of direct transfusion of the blood. G. SANTORO. *Arch. Italiano d. ginecol.*, 1913, xvi, 1.

Blood and Lymph Vessels

Frequency of varices of the legs of Japanese and the success of operation in a few cases. K. MIYAUCHI. *Arch. f. klin. Chir.*, 1913, c, 1079.

Two cases of aneurism treated by the Matas method. TULLY VAUGHAN. *Tr. Am. Neurol. Ass.*, 1913, May. [67]

Nervous syndromes caused by aneurisms of the subclavian artery. P. MAGAUDDA. *Riv. di patol. nerv. e ment.*, 1913, xviii, 83.

Professional aneurism of the superficial palmar arch. REGNAULT and BOURRUT-LACOUTURE. *Rev. de chir., Par.*, 1913, xlvii, 337. [67]

Arterial anomalies. VEIGA. *Gaz. d. hosp. do Porto*, 1913, vii, No. 5.

Some rare anomalies of the vessels. JATSOUTA. *Chir. Arch. Veliainova, St. Petersburg.*, 1913, xxix, No. 1.

Arterio-venous anastomosis for threatened gangrene of the foot. L. FREEMAN. *Tr. Am. Surg. Ass.*, 1913, May.

The employment of "reduced" blood circulation in the treatment of gangrene. LIDSKI. *Pract. Vrach.*, 1913, xii, 104.

Replacement of a segment of the inferior vena cava by a free transplantation of the external jugular vein of the same animal. JEGER and ISRAEL. *Arch. f. klin. Chir.*, 1913, c, No. 4.

Occlusion of the inferior vena cava, as a result of internal trauma. S. G. SHATTOCK. *Proc. Roy. Soc. Med.*, 1913, xi, 126. [68]

A case of partial suture of the arteria brachialis and a case of circular suture of arteria femoralis. H. FOWELIN. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 56.

Mechanical ligature in surgery. LASTARIA. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, No. 16.

Ligature of the right external iliac artery and vein. HENGGE. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 538.

Do infection of the wound and prolonged ligature of the limbs constitute a counter-indication for vascular sutures in injuries? DANIELSEN. *Zentralbl. f. Chir.*, 1913, xl, No. 11.

Experimental contributions to the study of the effect of bacterial toxins on the walls of blood vessels. A. LOWEN and R. DITTLER. *Ztschr. f. d. ges. exper. Med.*, 1913, i, 3.

Two methods in the employment of water in the treatment of acute phlebitis. JOLY. *Clinique, Par.*, 1913, viii, No. 11.

Pharyngeal phlebitis. W. STUART-LOW. *Clin. J.*, 1913, xli, 357.

Röntgenographs of normal peripheral blood vessels. V. REVESZ. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 39.

Injection of the vessels and its technique. DICK. *J. akush. i. jensk. boliez., St. Petersburg.*, 1913, xxviii, Feb.

Researches on the ductus thoracicus. J. BOURGET. *Bibliogr. anat.*, 1913, xxiii, 66.

Wounds of the thoracic duct in the neck with leakage. H. HORACE GRANT. *Lancet-Clin.*, 1913, cix, 282.

Poisons

Agents of infection which will pass through a filter, and malignant tumors. B. LIPSCHÜTZ. *Zentralbl. f. Bakteriologie*, 1913, lxxviii, 323.

The importance of bovine tubercular bacilli for man. WEBER. *Berl. klin. Wchnschr.*, 1913, l, 533.

Our present knowledge of the relation of bovine to human tuberculosis. F. G. GRIFFITHS. *Austral. M. Gaz.*, 1913, xxxiii, 275.

The branched forms of the tubercle bacillus, and immunity to tuberculosis. S. G. DIXON. *J. Am. M. Ass.*, 1913, lx, 993.

Recognition of tuberculosis by means of animal experimentation. P. ESCH. *München. med. Wchnschr.*, 1913, lx, 187.

A new method for the differentiation of certain of the streptococci. H. W. CROWE. *Proc. Roy. Soc. Med.*, vi, 117. [69]

Case of acute septicæmia due to *B. pyocyaneus*. J. M. CLARKE. *Bristol Med.-Chir. J.*, 1913, xxxi, No. 119.

Pathogenic anaerobes; a cerebellar abscess, caused by an anaerobic schizomycete, associated with chronic otitis,

sinus thrombosis, and cancer in the right petrous portion of the temporal bone. E. VON HIBLER. *Zentralbl. f. Bakteriol.*, 1913, lxxviii, 257.

Five cases of fungus poisoning. H. W. SYKES. *South African M. Rec.*, 1913, xi, 46.

Thiosinamin intoxication. T. IJIRI. *Japanische Ztschr. f. Dermatol. u. Urol.*, 1913, xii, No. 1.

Surgical Therapeutics

Treatment of wounds with sugar. G. MAGNUS. *München. med. Wchnschr.*, 1913, lx, 406.

Treatment of burns. R. J. GRIFFIN. *Merck's Arch.*, 1913, xv, 74.

On the treatment of carbuncles, boils, staphylococcal infections, and certain streptococcal infections by the internal administration of large doses of dilute sulphuric acid. J. REYNOLDS. *Lancet*, Lond., 1913, clxxxiv, 749.

The intraperitoneal employment of oil. MOMBURG. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 12.

Results of operative and non-operative treatment of abdominal tuberculosis. KÜMMEL. *Zentralbl. f. Chir.*, 1913, xl, 463. [69]

Treatment of surgical tuberculosis by Mesbé. C. MICHEJDA. *Prag. med. Wchnschr.*, 1913, xxxviii, 112.

The treatment of traumatic tetanus by magnesium. DUTOIT. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 12. The use of bismuth paste in the treatment of chronic suppurations. A. C. MCDANIEL. *Tex. St. J. M.*, 1913, viii, 295.

Non-operative treatment of malignant tumors. V. CHLUMSKY. *Klin-therap. Wchnschr.*, 1913, xx, 295.

Non-operative methods of treating malignant neoplasms. WERNER. *Berl. klin. Wchnschr.*, 1913, l, No. 10.

The action of heavy metals on malignant animal tumors. LEWIN. *Berl. klin. Wchnschr.*, 1913, l, No. 12.

Experimental contribution to the chemotherapy of malignant tumors. WERNER and SZECSI. *Ztschr. f. Chemotherap.*, 1913, i, 357.

The effect of mercury preparations on the growth of mouse cancer. S. STANISLAW. *Wien. klin. Wchnschr.*, 1913, xxvi, 577.

Colloidal celiun in the treatment of cancer. TOUCHE. *Bull. et mem. Soc. med. de Hôp. de Par.*, 1913, No. 7. Feb. [70]

Intravenous injections of various substances in animal cancer. LOEB and FLEISHER. *Tr. Am. Ass. Path. & Bacteriol.*, 1913, May. [70]

Gangrenous wounds treated by alcohol. BLANCHARD. *Bull. med., Par.*, 1913, xxvii, No. 24.

Collargol. KAUSCH. *Deutscher chir. Kong.*, 1913. [71] Experimental and clinical studies on the action of hormonol. SACKUR. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 9.

Synthetic hydrastinin-Bayer, a substitute for hydrastinum canadensis fluidum. H. WALTHER. *München. med. Wchnschr.*, 1913, lx, 694.

Extract of the suprarenal glands. J. SIKMAN. *N. Y. M. J.*, 1913, xcvi, 649.

Adhesiol-therapy in surgery and dermatology. DREUW. *Allg. med. Central-Zeitg.*, 1913, lxxxii, No. 10.

The action of electargol-clin. DAELS. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 10.

The action of scopalamine. CLOETTA. *Arch. f. exper. Pathol. u. Pharmakol.*, 1913, lxxi, No. 4.

Heated air in therapeutics (serothermotherapy). ROZIES and ARRIVAT. *Progrès méd., Par.*, 1913, xli, No. 9.

Surgical Anatomy

Anatomical investigations respecting the point at which certain cutaneous nerves which play an important rôle in local anaesthesia perforate the aponeurotic fascia. ROST. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

Some anatomical considerations of the disposition of the sciatic nerve and femoral artery; with suggestions as to their clinical significance. F. WOOD-JONES. *Lancet*, Lond., 1913, clxxxiv, 752.

Electrology

The chemical action of the Röntgen rays and of radium on carcinoma. FREUND and KAMINER. *Wien. klin. Wchnschr.*, 1913, xxvi, 201.

The employment of radium in surgery. A. STICKER. *Arch. f. physikal. Med. u. med. Tech.*, 1913, vii, 182.

Four years of experiments with röntgen ray apparatus with an interrupter (rectifier) and certain important modifications of the apparatus. GRÖDEL. *München. med. Wchnschr.*, 1913, lx, 471.

The chemical action of thorium X on organic substances, in particular on uric acid. FALTA and ZEHNER. *Berl. klin. Wchnschr.*, 1913, l, No. 9.

The effect of X-rays on surgical tuberculosis. NEU. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 3-4.

The practical application of electricity as a therapeutic agent; constipation; headache. J. R. ETTER. *Med. Summary*, 1913, xxxv, 5.

Death by electric currents and by lightning. A. J. JEX-BLAKE. *Brit. M. J.*, 1913, i, 492.

Diagnostic significance of the ultra violet rays. N. A. KURSCHAKOW. *Nachricht. d. Kaiserl. militar-med. Akad.*, 1913, i, 26.

Heliotherapy. ESTOR. *Montpellier méd.*, 1913, xxxvi, No. 10.

Heliotherapy in non-tuberculous affections. AIMES. *Presse méd., Par.*, 1913, xxi, No. 23.

Conditions which favor the employment of heliotherapy. JAUBERT. *Lyon méd.*, 1913, cxx, No. 12.

Military and Naval Surgery

Military surgery. G. M. BLECH. *Am. J. Surg.*, 1913, xxvii, 88.

New methods in surgery and their importance in the practice of the military surgeon. FLATH. *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, 167.

The treatment of wounds caused by projectiles from revolvers and military rifles. RECLUS. *Presse méd., Par.*, 1913, xxi, 23.

Injury of the abdomen by a Browning pistol. DIWALD. *Wien. med. Wchnschr.*, 1913, lxiii, No. 10.

Gaseous disinfection of equipment in the field. EDW. L. MUNSON. *Military Surg.*, 1913, xxxii, 135.

The effect of pointed projectiles. LOTSCH. *Deutsche med. Wchnschr.*, 1913, xxxix, 601.

Surgical Diagnosis

Chemical properties of urine in cancer of the internal organs and their importance from the diagnostic point of view. VOLPE. *Pract. Vrach., St. Petersburg*, 1913, xii, No. 7.

Reflex pains in internal affections and their diagnostic significance. O. PORGES. *Klin-therap. Wchnschr.*, 1913, xx, 349.

GYNECOLOGY

Uterus

The fight against cancer of the uterus. LIZCANO. *Siglo méd.*, Madrid, 1913, lix, No. 3092.

Cancer and sarcoma of corpus uteri in a 57-year-old patient. H. HEDINGER. *Deutsche med. Wchnschr.*, 1913, xxxix, 488.

Nonsurgical treatment of cancer. A. THEILHABER. *Berl. klin. Wchnschr.*, 1913, l, 348.

The extended vaginal operation for cancer of the cervix uteri. GEORGE GELLHORN. *Surg., Gynec. & Obst.*, 1913, xvi, 284. [72]

The radical operation for cancer of the uterus. THOMAS S. CULLEN. *Surg., Gynec. & Obst.*, 1913, xvi, 265. [72]

The radical abdominal operation for cancer of the uterus. JOHN G. CLARK. *Surg., Gynec. & Obst.*, 1913, xvi, 255. [73]

The extended abdominal radical operation for cancer of the uterus. WILLIAM WIEBEL. *Surg., Gynec. & Obst.*, 1913, xvi, 251. [73]

Extirpation of the cancerous uterus by the vulvoperineal route. PAUCHET. *Arch. prov. de chir.*, Par., 1913, xxii, No. 2.

Results of the radical abdominal operation for cancer of the uterine cervix; report of 25 cases. JOHN A. SAMPSON. *Surg., Gynec. & Obst.*, 1913, xvi, 304. [74]

Results after the Wertheim operation for carcinoma of the uterus. J. CRAIG NEEL. *Surg., Gynec. & Obst.*, 1913, xvi, 293. [74]

The study of six cases of malignant chorio-epithelioma. POLLOSSON and VIOLET. *Lyon chir.*, 1913, ix, 233. [75]

The relation between sarcoma of the uterus and its bearings on X-ray therapy of uterine myomata. JAMES RAGLAN MILLER. *Surg., Gynec. & Obst.*, 1913, xvi, 315. [75]

Radiology of myomata. FOVEAU DE COURMELLES. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 9.

X-ray treatment of myomata of the uterus. LAQUERRIERE and DELHERM. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 1.

The treatment of myomata of the uterus. GUILLMINOT. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 1.

Surgical treatment of myomata. K. FLEISCHMANN. *Wien. klin. Wchnschr.*, 1913, xxvi, 445. [76]

Etiology of fibromyomata of the uterus. AIMES. *Progrès méd.*, 1913, xli, No. 12.

Fibromyoma of the uterus presenting unusual characters. GILES. *Proc. Roy. Soc. Med.*, 1913, vi, 124.

Red degeneration of uterine fibromyomata. SMITH and SHAW. *Proc. Roy. Soc. Med.*, 1913, vi, 131. [81]

An unusual train of symptoms caused by uterine fibroids. V. BERRY. *J. Okla. St. M. Ass.*, 1913, v, 471.

The radical treatment of uterine fibroids based on their association with malignancy. R. E. SKEEL. *Cleveland M. J.*, 1913, xii, 166.

Mammin in uterine hæmorrhages. VON DER HOEVEN. *Nederl. Tijdschr. v. Geneesk.*, 1913, i, 606. [82]

Non-puerperal uterine bleeding. C. C. ELLIOTT. *South African Med. Red.*, 1913, xi, 44.

Further report of cases of dysmenorrhea relieved by nasal treatment. BRETTAUER. *Tr. Am. Gynec. Ass.*, 1913, May. [77]

Foreign bodies in the uterus. KASTANAEFF. *Ärzte-Ztg.*, 1913, xx, 342.

The management of uterine misplacement. R. J. BAZE. *J. Okla. St. M. Ass.*, 1913, v, 452.

The relaxation of the cervix in the surgical treatment of antelexion of the uterus. DELLE CHIAIE. *Arch. ital. de gynec.*, 1913, xvi, 39.

Uterine inversion and its treatment. PEIXOTTO. *Imprensa med.*, Sao-Paulo., 1913, xxi, No. 3.

Preference of operations for retroversions. J. M. INGE. *Texas St. M. J.*, 1913, viii, 297.

Operations for uterine prolapse compared. A. W. ABBOTT. *J.-Lancet*, 1913, xxxiii, 171.

Rupture of the uterus. BARTON COOKE HIRST. *Surg., Gynec. & Obst.*, 1913, xvi, 330.

Use and abuse of the uterine curette. BELLE C. ESKRIDGE. *Texas St. J. M.*, 1913, viii, 288.

Uterine curettage. J. D. SOURWINE. *Med. Council*, 1913, xviii, 101.

The technique of curettage. HERZ. *Wien. med. Wchnschr.*, 1913, lxiii, No. 11.

The technique of abdominal hysterectomy. N. F. LANE. *Hahneman. Month.*, 1913, xlviii, 207.

Some points in the technique of complete hysterectomy. P. B. SALATICH. *New Orleans M. & S. J.*, 1913, lxv, 640.

Description of Murphy's method of abdominal hysterectomy. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 2. [77]

Adnexal and Periuterine Conditions

Clinical and experimental contributions on the question of the so-called "ovarian insufficiency." MOSBACHER and MAYER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, No. 3.

A case of ovarian tumor of rare localization. DELETREZ. *Gynecologie*, Par., 1913, xvii, No. 1.

A successful method of treatment in a case of sarcoma (recurrent) of the ovary which had invaded the vertebral column. SEELIGMANN. *München. med. Wchnschr.*, 1913, lx, No. 12.

Sarcoma of the ovary in a nursling. LESAGE and GIRAULT. *Arch. de Méd. des Enfants*, Par., 1913, xvi, No. 3.

A case of pure cholesteatoma of the ovary. CHAPIUS. *Arch. de méd. exper. et d'anat. pathol.*, Par., 1913, xxv, No. 2.

Neuro-epithelioma of the ovary. GOSSET and MASSON. *Rev. de Gynec. et de Chir. abdom.*, 1913, xx, 1. [78]

A case of primary fibro-sarcoma of the ovary. FITZGIBBON. *Med. Press & Circ.*, 1913, cxlv, 305.

Parovarian cyst associated with peritoneal tuberculosis. PEISSER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 522.

Voluminous cyst of the ovary; their differential diagnosis. MARINELLI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 8.

Chronic appendicitis and sclerocystic ovaries. LAPEYRE. *Arch. mens. d'Obst. et de gynéc.*, Par., 1913, ii, No. 3.

Hæmatocoele as a sequela of the rupture of a cyst of the corpus luteum. BENTHIN. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxv, 532.

The so-called "strangulated" hernias of the adnexa. MATTEY. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 2.

The bearing of intestinal lesions on operative prognosis of tuberculous adnexitis (especially lesions of the small intestine). DESGOUTTES and OLIVIER. *Lyon méd.*, 1913, cxx, No. 11.

The conservative treatment of salpingitis by uterine and tubal injection. I. S. STONE. *J. Am. M. Ass.*, 1913, lx, 656.

Shortening the uterosacral ligaments. H. GRAD. *N. Y. M. J.*, 1913, xcvi, 584.

Varicosity of the broad ligaments simulating extra-uterine pregnancy. VON DITTEL. *Rev. méd. d'Egypte*, Cairo, 1913, i, No. 2.

On the nature of the so-called ligaments of Mackenrodt. MORITZ. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 135. [79]

Pelvic inflammations can be abated if not aborted. V. B. HARRINGTON. *Mass. M. J.*, 1913, No. 3, 85.

External Genitalia

Malignant primary tumors of the vagina. VIRENQUE. *Arch. mens. d'obst. et de gynéc.*, Par., 1913, ii, No. 2.

Vesico-vaginal fistulæ. MAUCLAIRE. *Progrès méd.*, Par., 1913, xli, No. 13.

A modification in the treatment by tamponment. KRAUS. *Gynäk. Rundschau* 1913, vii, No. 5.

Hæmatoma vulvæ. TIEGEL. *Deutsche med. Wchnschr.*, 1913, xxxix, 67.

Pruritus vulvæ. A. STEIN. *Merck's Arch.*, 1913, xv, 76.

Vulvo vaginitis in children. EDITH R. SPAULDING. *Am. J. Dis. Child.*, 1913, v, 245. [79]

Vulvovaginitis in children. VELEBIL. *Čas. lék. česk.*, Prague, 1913, lii, No. 7.

A case of cyst of the labia minora. TOURNAUX. *Toulouse méd.*, 1913, xv, No. 4.

Operation for the cure of rectocele and restoration of the function of the pelvic floor. GEORGE J. WARD, Jr. *Tr. Am. Gynec. Ass.*, 1913, May. [80]

Perineorrhaphy with the figure-of-eight suture. CHAS. C. CHILD. *J. Am. M. Ass.*, 1913, lx, 894.

Miscellaneous

X-ray treatment in gynecology. HEIMANN. *Monatsh. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, No. 3.

The progress of X-ray treatment in gynecology; its advantages; exact technique; indications and contra-indications; results; future. H. BORDIER. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 1.

Röntgenotherapy in gynecology. DIETLEN. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 1.

Gynecological röntgenotherapy; experience with it, technique, and the results obtained. HAENISCH. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 1.

The treatment of leucorrhea due to gonococcus infection. E. McDONALD. *Am. Med.*, 1913, xix, 157. [80]

Progress of the study of diseases of women during 1912. FREDERICK J. McCANN. *Practitioner, Lond.*, 1913, xc, 598.

The conduct of gynecological and obstetrical operations in the presence of acute chronic endocarditis. JOHN C. POLAK. *Tr. Am. Gynec. Ass.*, 1913, May. [80]

Methods of physical treatment in gynecology. FRANZ. *Ztschr. f. ärztl. Fortbild.*, 1913, x, 137.

Etiology and treatment of pyelitis in the female. KRÖMER. *Deutsche med. Wchnschr.*, 1913, xxxix, 483. [80]

Foreign bodies in the female urinary bladder. JOS. SENGE. *Ztschr. f. gynäk. Urol.*, 1913, iv, 91.

The influence of the social factor upon the origin of tumors. A. THEILHABER. *Krankh. u. soz. lage*, 1913, iii, 608.

Reflex pains provoked by pressure on the coeliac plexus in inflammatory affections of the genital organs in woman. ALPERIN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 10.

The genital functions of the ductless glands in the female. W. B. BELL. *Brit. M. J.*, 1913, i, 645.

Bacteriology of the female genital apparatus. BRINK. *Gynäk. Rundschau*, 1913, vii, No. 5.

A case of feminine pseudo-hermaphroditism. CANTILENA. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 23.

Genital localization of micro-organisms in experimental septicæmia. SELLA. *Ann. di ostet. e ginec.*, Milano, 1913, xxxv, No. 2.

OBSTETRICS

Pregnancy and Its Complications

Abderhalden's serodiagnosis of pregnancy and its practical application. HENRY SCHWARTZ. *Interst. M. J.*, 1913, xx, 195.

Psychoses of pregnancy and the influence of pregnancy on existing psychic and neorologic diseases. J. L. B. ENGELHARD. *Nederl. Tijdschr. v. verloskunde en gynacol.*, 1913, xxi, 1.

Report of case of pregnancy with hydramnion. S. J. DRUSKIN. *Am. Med.*, 1913, xix, 190.

Myoma and pregnancy; the therapeutical indications. G. T. HARRISON. *Va. M. Semi-Month.*, 1913, xvii, 601. [81]

Myoma and pregnancy. HAUSER. *Klin.-therap. Wchnschr.*, 1913, xx, 317. [81]

Myomectomy in case of a gravid uterus; recovery; continuation of gestation. VIANNAY. *Gaz. d. Gynec.*, 1913, xxviii, 8. [82]

Pyosalpinx and pregnancy. ONSLOW REAGAN. *Med. World*, 1913, xxxi, 119.

Treatment of pyelitis in the pregnant. H. BRONGERSMA. *Nederl. Tijdschr. v. Geneesk.*, 1913.

Bladder troubles in pregnancy. A cystoscopic study based on 54 cases. E. McDONALD. *Am. Med.*, 1913, xix, 180. [82]

Appendicitis during pregnancy; a report of three cases. CATURANI. *Arch. ital. di ginec.*, Napoli, 1913, xvi, No. 2.

Quincke's disease and pregnancy. BALLERINI. *Ann. di ostet. e ginecol.*, Milano, 1913, xxxv, 249.

Glycosuria and diabetes from the obstetrical and gynecological point of view. COLONI. *Ann. di ostet. e ginecol.* Milano, 1913, xxxvi, No. 2.

The conduct of gynecological operations; also of pregnancy and labor in acute and chronic affections of the heart. WEBSTER. *Tr. Am. Gynec. Ass.*, 1913, May. [83]

Diagnosis and treatment of ectopic gestation. J. C. McGEE. *J. Kansas M. Soc.*, 1913, xiii, 110.

Ectopic pregnancy occurring twice in the same patient. A. ANDREWS. *Austral. M. Gaz.*, 1913, xxxiii, 232.

Ectopic pregnancy and intraperitoneal hæmorrhages from ovarian cysts, particularly those of the corpus luteum. REINHARD. *Gynäk. Rundschau*, 1913, vii, No. 6.

Pregnancy after interstitial gestation. NORMAN DUNLOP. *Austral. M. Gaz.*, 1913, xxxiii, 214.

Interstitial pregnancy. SIEFART. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 10.

The early recognition of extra-uterine pregnancy. R. C. CASSELBERRY. *Hahneman. Monh.*, 1913, xlviii, 203.

Extra-uterine pregnancy. KOUSMIN. *J. akush. i. jensk. boliez.*, St. Petersburg, 1913, xxvii, Feb.

Extra-uterine pregnancy during the early months. JNO. M. LEE. *J. Am. Inst. Homeopathy*, 1913, v, 894.

Extra-uterine pregnancy and appendicitis. CHATON. *Arch. méd.-chir. de Province, Poitiers*, 1913, viii, No. 2.

The surgical importance of the vessels of neoformations in extra-uterine pregnancy and in abdominal tumors. GOUBAREFF. *J. akush. i. jensk. boliez.*, St. Petersburg, 1913, xxviii, Feb.

Case of ovarian pregnancy with full time foetus. GRIMSDALE. *J. Obst. & Gynec.*, *Brit. Emp.*, 1913, xxiii, 115. [83]
Eclampsia. C. J. BRESEE. *Clinique*, 1913, xxxiv, 144.

Etiology of eclampsia. L. V. SAMS. *J. Kansas M. Soc.*, 1913, xiii, 106.

Damages to the kidney in eclampsia. A. ZINSSER. *Berl. klin. Wchnschr.*, 1913, 1, 388. [83]

Pathogenesis and treatment of eclampsia. A. J. JARZEW. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 301.

Eclampsia and its treatment. A. LABHARDT. *Schweizer Rundschau f. Med.*, 1913, xiii, 462.

Treatment of eclampsia by intralumbar injections of normal pregnancy serum. A. MAYER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 297. [83]

Injections into the spinal cord for the treatment of eclampsia. GUGGISBERG. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 369.

The conservative treatment of toxæmia of pregnancy with convulsions. GREEN. *Boston M. & S. J.*, 1913, clxviii, 376. [84]

The present position of abdominal Cæsarean section in eclampsia. J. T. WILLIAMS. *Boston M. & S. J.*, 1913, clxviii, 456. [84]

The indications for abdominal Cæsarean section with the technique of the operation and analysis of 352 cases. R. MCPHERSON. *N. Y. St. J. Med.*, 1913, xiii, 135.

Abdominal Cæsarean section in eclampsia and central placenta previa, with reports of cases so treated. E. M. WILLIAMS. *New Orleans M. & S. J.*, 1913, lxxv, 635.

Late Cæsarean section in a case of contracted pelvis. SOUTO. *Arch. Brasil. de med.*, Rio de Janeiro, 1912, ii, No. 6.

An interesting case of Cæsarean section. HENRY M. O'HARA. *Med. Press & Circ.*, 1913, cxlvi, 225.

Sixteen cases of Cæsarean operation. NOVIKOFF. *J. akush. i. jensk. boliez.*, St. Petersburg, 1913, xxviii, Feb.

The application of the Cæsarean operation to infected uteri. DE BOVIS. *Semaine méd.*, 1913, xxxiii, No. 10.

Cæsarean section in double uterus and double vagina. SCOTT. *Am. J. Obst.*, N. Y., 1913, lxvii, 519. [84]

Experimental investigations on the dangers resulting from miscarriages and their prevention. WOLFF-EISNER. *München. med. Wchnschr.*, 1913, ix, No. 9.

Prolapse of the pregnant uterus. RUDAUX. *Clinique*, Par., 1913, viii, No. 11.

Uterus bicornis as cause of chronic transverse position. C. H. VON KLEIN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 452. [84]

Placenta prævia. H. M. CAMPBELL. *W. Va. M. J.*, 1913, vii, 289.

Synopsis of recent investigations of placenta prævia. C. GARBER. *Clinique*, 1913, xxxiv, 127.

Surgical treatment of hæmorrhages in pregnancy, delivery, and the third stage of labor. BAR. *Gynäk. Rundschau*, 1913, vii, No. 5.

Labor and Its Complications

Indications for the use of forceps. H. C. GRANT. *Va. M. Semi-Month.*, 1913, xvii, 592.

When is the high forceps operation justifiable? J. A. HARRAR. *Bull. Lying-In Hosp.*, N. Y., 1913, ix, 26.

Faulty presentations in obstetrics. F. B. GROSVENOR. *Eclect. M. J.*, 1913, lxxiii, 132.

Face presentation. C. D. R. KIRK. *Eclect. M. J.*, 1913, lxxiii, 136.

Breech presentation. GEO. B. KELSO. *Clinique*, 1913, xxxiv, 131.

The relation of the different artificial deliveries to each other. P. C. T. HOEVEN. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 289.

Under what conditions should uterine inertia be treated by artificial delivery? CRAGIN. *Tr. Am. Gynec. Ass.*, 1913, May. [85]

Uterine inertia; its treatment. HARRISON. *Tr. Am. Gynec. Soc.*, 1913, May. [86]

Fœtal overgrowth and its significance in labor. G. W. KOSMAK. *N. Y. St. J. Med.*, 1913, xiii, 128.

Case of rupture of vaginal fornix during labor. E. A. BJORKENHEIM. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 269.

Rupture of the uterus. B. P. KONWER. *Niederl. gynæcol. Ges., Sitzungsber.*, 1913, Feb. 9.

The delivery of the placenta and membranes. LOUIS FAUST. *N. Y. St. J. Med.*, 1913, xiii, 141.

Sekakornin as a prophylactic in the third period of labor. W. J. GUSSEW. *Zentralbl. f. d. ges. Therap.*, 1913, xxxi, 169.

Radical and conservative methods in obstetric treatment. G. W. KOSMAK. *Med. Rec.*, 1913, lxxviii, 514.

Puerperium and Its Complications

Puerperal eclampsia. A. P. BUTT. *W. Va. M. J.*, 1913, vii, 297.

Puerperal eclampsia. WOLVERTON. *Am. J. Clin. Med.*, 1913, xx, 218.

Puerperal inversion of the uterus. W. ZANGEMEISTER. *Deutsche med. Wchnschr.*, 1913, xxxix, 729.

The puerperium and its relation to puerperal fever. G. T. BIRDWOOD. *Indian M. Gaz.*, 1913, xlviii, 94.

The treatment of puerperal sepsis at the Sloane Hospital for Women. WARD. *Am. J. Obst.*, N. Y., 1913, lxvii, 464. [87]

The local treatment of fresh puerperal infection. A. ABELHEIM. *Transvaal M. J.*, 1913, viii, 206.

Treatment of puerperal thrombophlebitis. FINLDEY. *Tr. Am. Gynec. Ass.*, 1913, May. [87]

Miscellaneous

Two hundred obstetrical cases—deductions therefrom and remarks on unusual cases. L. H. MURDOCK. *J. Okla. St. M. Ass.*, 1913, v, 466.

The obstetrician and the perineum; his care of, during and after labor. A. E. COX. *J. Ark. M. Soc.*, 1913, ix, 232.

Factors in the formation of skin striations during pregnancy. F. Q. TAUSSIG. *Tr. Am. Gynec. Ass.*, 1913, May. [88]

Demonstration of the infant pulmotor with remarks on its use in the treatment of asphyxia neonatorum. H. D. FRY. *Tr. Am. Gynec. Ass.*, 1913, May. [88]

Forced oxygen respiration for combating asphyxia in the new-born. F. ENGELMANN. *Med. Klin.*, 1913, ix, 325.

The central temperature of the new-born and the premature-born. E. APERT. *Nourrisson*, 1913, i, 29.

Immediate treatment of depressed fractures of the skull in the new born. G. W. KOSMAK. *Bull. Lying-In Hosp.*, N. Y., 1913, ix, 34.

Etiology, symptomatology and surgical treatment of meningeal hæmorrhages in the new-born. J. DOAZAN. *Arch. gen. d. chir.*, 1913, vii, 10. [88]

Treatment of syphilis in the suckling. A. LEVY-BING. *L'enfance*, 1913, i, 28.

Mummified twins. NYHOFF. *Nederl. gyn. verenig. Sitzungsber.*, 1913, Mar. 9.

Demonstration of a foetus with a solid embryoma of coccyx. E. AULHORN. *München. med. Wchnschr.*, 1913, lx, 667.

The inflammatory nature of placental chorio-angioma (benign tumors of the placenta). PLAUCHU and SAVY. *Arch. mens. d'obst. et de gynéc.*, Par., 1913, ii, No. 3.

The pathogenesis of exaggerated inclination of the pelvic basin. FRANKEL. *München. med. Wchnschr.*, 1913, lx, 579.

Chorionic villi in the uterine wall eighteen years after the last pregnancy. RIES. *Am. J. Obst.*, N. Y., 1913, lxvii, 433. [89]

Sterility in the female: its etiology and treatment, with report of a case of instrumental impregnation. E. McDONALD. *Am. Med.*, 1913, xix, 141.

The difficulty of producing sterility by operation on the Fallopian tubes. LEONARD. *Am. J. Obst.*, N. Y., 1913, lxvii, 443. [89]

Deaths occurring after Momburg's hæmostasis. G. STERNBERG. *Med. Klin.*, 1913, ix, 166.

Mothers and their offspring treated with salvarsan. M. HOLTH. *Deutsche med. Wchnschr.*, 1913, xxxix, 462.

The use of foetal serum to cause the onset of labor. A. J. RONGY. *N. Y. St. J. Med.*, 1913, xiii, 119. [90]

On the action of pituitrin and histamin on the isolated uterus. H. FÜHNER. *Therap. Monatsh.*, Berl., 1913, xxvii, 202.

The isolated effective substances of the hypophysis. H. FÜHNER. *Deutsche med. Wchnschr.*, 1913, xxxix, 491.

Hypophysis extract in obstetrics. PARI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 84. [90]

On the action of hypophyseal extract. F. LIEVEN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 337.

Pituglandol in the treatment of placenta prævia. P. GALL. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 334.

Pituitary extract in uterine inertia. J. C. EDGAR. *Tr. Am. Gynec. Ass.*, 1913, May. [90]

Arsenobenzol in obstetrics. J. BOBRIE. *Ann. d. malad. vener.*, 1913, viii, 55. [91]

A new obstetrical rubber bag. F. L. GOOD. *Surg., Gynec. & Obst.*, 1913, xvi, 329. [92]

Biologic diagnosis of pregnancy. E. ENGELHORN. *München. med. Wchnschr.*, 1913, lx, 587.

Diagnosis of early pregnancy. E. McDONALD. *Am. Med.*, 1913, xix, 169. [92]

GENITO-URINARY SURGERY

Kidney and Ureter

The suprarenal capsules and their relation to convulsive states and with special consideration of epilepsy. T. SILVESTRI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 201.

Blood circulation of the kidney; anatomy. VILLANDRE. *Progrès méd.*, Par., 1913, xli, No. 11.

The exact diagnosis of renal and ureteral calculi. C. EASTMOND. *Urol. & Cutan. Rev.*, 1913, xvii, 123.

Statistics and etiology of floating kidneys. K. NEUSTAB. *Russk. Vrach*, 1913, xii, 186.

Newer ideas relating to the subject of loose kidney. R. T. MORRIS. *Post-Graduate*, 1913, xxviii, 244.

The right kidney—a disquieting factor in the diagnosis of acute intra-abdominal conditions. W. L. PEPLÉ. *Va. M. Semi-Month.*, 1913, xvii, 610.

Incrustations of the renal pelvis and ureter. J. D. CAULK. *Tr. Am. Ass. Genito-Urin. Surg.*, 1913, May. [93]

Symptoms of intestinal occlusion in nephritic colic. QUENU. *Bull. med.*, Par., 1913, xxvii, No. 18-19.

Renal hæmaturia. H. L. ELSNER. *N. Y. St. J. Med.*, 1913, xiii, 144.

Hypernephromata of the kidney. HARTTUNG. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

The cystic kidney question. O. BERNER. *Virchows Arch. f. pathol. Anat. u. Physiol.*, 1913, ccxi, 265.

Operation in a case of renal cyst. THORBERG. *Hosp.-Tid.*, Kjøbenhavn, 1913, lvi, No. 13.

A case of hydatid cyst of the kidney. PLUYETTE and GAMEL. *Marseille méd.*, 1913, i, No. 6.

Hydatid cyst of the left kidney; nephrectomy; recovery. DIAMANTIS. *Rev. méd. d'Egypte*, Cairo, 1913, i, No. 2.

Pyelitis. R. OPPENHEIMER. *Ztschr. f. urol. Chir.*, 1913, i, 17. [93]

Tuberculosis of the kidneys. W. KARO. *Urol. & Cutan. Rev.*, 1913, xvii, 129.

Timeliness of diagnosis and intervention in renal tuberculosis. BAZY. *J. d'Urol.*, Par., 1913, iii, No. 3.

The diagnosis of renal tuberculosis. SERES. *Cron. med.*, Valencia, 1913, xxv, 9.

Tubercule and nephrectomy in renal tuberculosis. DE LA PENA. *Rev. de la med. y cir. pract.*, Madrid, 1913, xxxvii, No. 1259.

Dilatation and infection of the renal pelvis. VOELCKER. *Ztschr. f. urol. Chir.*, 1913, i, 112.

The pathological physiology of renal decapsulation and the indications and contra-indications for the operation. P. A. ERTZBISCHOFF. *Am. J. Urol.*, 1913, ix, 138. [94]

Unilateral and bilateral renal decapsulation. PENKERT. *Med. Klin.*, 1913, ix, No. 9.

Operative treatment of nephritis. HERZ. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 10.

Contribution to the surgery of the nephritides. A. POUSSON. *Berl. klin. Wchnschr.*, 1913, i, 381. [94]

Lumbar nephropexy. TENANI. *Policlin.*, Roma, 1913, xx, No. 10.

Nephropexy by suspension with transplanted fascia. K. HENSCHEN. *Arch. f. klin. Chir.*, 1913, c, 962. [96]

The future of nephrectomized patients. BAZY. *Bull. méd.*, Par., 1913, xxvii, No. 16.

Pyelotomy with incision of the anterior wall of the renal pelvis. ILLYES. *Zentralbl. f. Chir.*, 1913, xl, No. 2.

How to treat the wounds secondary to pyelotomy. BASTIANELLI. *Zentralbl. f. Chir.*, 1913, xl, No. 12.

Experiences with transplantation of kidneys. MANTELLI. *Gior. d. r. Accad. di med. di Torino*, 1912, lxxv, No. 12.

Demonstrations in surgery of the kidneys. W. ISRAEL. *Ztschr. f. Urol.*, 1913, vii, 262.

The clinical value and interpretation of the constant in surgery of the kidney. LEGUEU. *Progrès méd.*, Par., 1913, xli, No. 12.

The clinical value and interpretation of the constant of urea secretion. LEGUEU. *J. d'Urol.*, 1913, iii, 289. [95]

On methods of functional examination of diseased kidneys. JANOVSKY. *Russk. Vrach*, 1913, xii, No. 6.

The function of the kidneys; based on microscopic observations of the living organism. M. GHIRON. *Arch. f. d. ges. Physiol.*, Bonn, 1913, cl, 405.

Tests for renal sufficiency by means of phenolsulphonphthalein. FROMME and RUBNER. *München. med. Wchnschr.*, 1913, lx, 588. [96]

Functional test of the kidneys by means of phenolsulphonphthalein. E. ERNE. *München. med. Wchnschr.*, 1913, lx, 510.

The influence of collargol injection into the kidney and kidney pelvis. G. STRASSMAN. *Ztschr. f. urol. Chir.*, 1913, l, 126. [96]

Pyelography in a case of putrefaction caused by collargol in the uriniferous tubules of the kidney and in the malpighian corpuscles. TROELL. *Hygiea*, Stockholm, 1913, lxxv, No. 2.

Two clinical lectures on calculus in the upper urinary tract. F. J. STEWARD. *Clin. J.*, 1913, xli, 390.

Treatment of ureteral lithiasis. F. VOELCKER. *Ztschr. f. urol. Chir.*, 1913, i, 1.

Ureteral obstruction. BENJAMIN TENNEY. *Boston M. & S. J.*, 1913, clxviii, 373.

Supernumerary ureters. PAWLOFF. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 5-6.

Myoma of the ureter and multiple kidney myoma. BRONGERSMA. *Nederl. Tijdschr. v. Geneesk.*, 1913, 495.

Tuberculosis of the urinary system in women. EDW. H. RICHARDSON. *Va. M. Semi-Month.*, 1913, xvii, 578.

A case of exclusion of the iliac ureter; nephrectomy; recovery. PERARD. *Arch. prov. de chir.*, Par., 1913, xxii, No. 2.

Bladder, Urethra and Penis

Vesical calculus. EDW. L. KEYES. *Long Island M. J.*, 1913, vii, 89.

Histology of the Egyptian vesical calculi. PFISTER. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, Nos. 3-4.

Vesical calculi and direct vision cystoscopy. FERRON. *J. d'Urol.*, Par., 1913, iii, No. 3.

Cystoscopy in cases of bladder stone. G. MARION. *J. d'Urol.*, Par., 1913, iii, 311.

A hairpin in the bladder. LEGUEU. *J. d. praticiens*, Par., 1913, xxvii, No. 9.

Three unusual cases of rupture of the bladder. G. WOOLSEY. *Tr. Am. Surg. Ass.*, 1913, May. [96]

The radical treatment of congenital diverticulum of the bladder. J. M. VAN DAM. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 320. [97]

Congenital diverticulum of the bladder with a contractile sphincteric orifice. L. BUERGER. *Urol. & Cutan. Rev.*, 1913, xvii, 135.

A case of malignant tumor of the bladder presenting a syncytial structure. BLECHER and MARTIUS. *Ztschr. f. Urol.*, 1913, vii, 269.

Vesical tumors among workmen employed in aniline factories. A. LEWIN. *Ztschr. f. Urol.*, 1913, vii, 282.

Skiagraphic demonstration of vesical tumors. KELLY and LEWIS. *Surg., Gynec. & Obst.*, 1913, xvi, 308. [97]

Cysts of the urinary bladder. R. HOTTINGER. *Folia urol.*, Leipzig, 1913, vii, 453.

Etiology of cystitis and emphysematosis a contribution to gas forming bacteria of the colon group. S. SCHONBERG. *Frankfurter Ztschr. f. Pathol.*, 1913, xii, 289.

The treatment of cystitis in women, with remarks on the practical value of the cystoscope. E. McDONALD. *Am. Med.*, 1913, xix, 150.

Exclusion of the urinary bladder on account of tuberculosis. L. CASPAR. *Berl. klin. Wchnschr.*, 1913, l, 492.

Sequelæ of gangrenous inflammations of the bladder. STRELKOFF. *Kazan. med. J.*, 1913, xii, No. 5.

A case of syphilis of the bladder. PICKER. *Ztschr. f. Urol.*, 1913, vii, No. 3.

Primary suture of the bladder. H. A. MOORE. *Urol. & Cutan. Rev.*, 1913, xvii, 133.

Exclusion of the bladder; an operation of necessity and expediency. C. H. MAYO. *Tr. Am. Surg. Ass.*, 1913, May.

On direct cystoscopy. G. LUYIS. *Ztschr. f. urol. Chir.*, 1913, l, 103.

Suprapubic cystostomy. C. G. CUMSTON. *N. Y. M. J.*, 1913, xcvi, 646.

Further remarks on the modification of the Cuneo-Heitz-Boyer-Hovelacque procedure for the treatment of vesical exstrophy which I have proposed. LASTARIA. *Arch. ital. di ginec.*, Napoli, 1913, xvi, No. 2.

A case of exstrophy of the bladder, treated by the operation of Heitz-Boyer-Hovelacque. A. GOSSET. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 229.

The dangers of rapid and complete evacuation of the bladder in prostatic subjects who present complete retention. C. NEGRET. *Rev. ibero-americana de cienc. med.*, 1913, xxix, 83.

Residual urine in old men. S. P. DELAUP. *New Orleans M. & S. J.*, 1913, lxx, 652.

Affections of the urethra. E. ROUCAYROL. *Ztschr. f. Urol.*, 1913, vii, 181.

Clinical manifestations of lesions at the crest of the urethra (colliculus seminalis). VASSILIEFF. *Chir. Arch. Veliaminova*, St. Petersburg, 1913, xxix, No. 1.

A rare type of foreign body in the urethra in man. HÄUER. *München. med. Wchnschr.*, 1913, lx, 530.

Urethral and vesical irrigation. H. W. HOWARD. *Northwest Med.*, 1913, v, 77.

Surgical anatomy of the crest of the urethra (colliculus seminalis). CHEWKOUNENKO. *Chir. Arch. Veliaminova*, St. Petersburg, 1913, xxix, No. 1.

Induratio penis plastica. M. ZUR VERTH and K. SCHEELE. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 298.

A peculiar form of plastic surgery of the penis. JANSEN. *Med. Klin.*, 1913, ix, No. 12.

Operative treatment of cancer of the penis. J. ZOARSKI. *Przegl. chir. i. ginek.*, 1913, viii, 136.

Genital Organs

Seminal calculi simulating nephrolithiasis. JAMES and SHUMAN. *Surg., Gynec. & Obst.*, 1913, xvi, 302. [98]

Chronic seminal vesiculitis. A. HYMAN and A. S. SANDERS. *N. Y. M. J.*, 1913, xcvi, 652.

Catheterization of the ejaculatory ducts. G. LUYIS. *Clinique*, Par., 1913, No. 7, 98. [99]

Skiagraphy of the seminal ducts. WM. T. BELFIELD. *J. Am. M. Ass.*, 1913, lx, 800.

The presence of tubercular bacilli in the urine in tuberculosis of the testicles. LÖWENSTEIN. *Deutsche med. Wchnschr.*, 1913, xxxix, 499.

Davison's operation for undescended testicle. H. B. GESSNER. *New Orleans M. & S. J.*, 1913, lxv, 641.

Modification of the surgical treatment of cryptorchidism. PERIMOFF. *Kazan. med. J.*, 1913, xii, No. 5.

Experimental investigations on the effect of radiological treatment of the testicles and the prostate gland. L. ZINDEL. *Ztschr. f. urol. Chir.*, 1913, i, 75.

A contribution to the diagnostics of prostatic calculi. W. M. BRICKNER. *Med. Rev. of Rev.*, 1913, xix, 163.

Remarks on the diagnosis and treatment of diseases of the prostate and verumontanum. JOHN R. CAULK. *Illinois M. J.*, 1913, xxiii, 270.

Four cases of prostatic disease. W. HUTCHINSON. *Am. J. Urol.*, 1913, ix, 133.

The treatment of the prostatic enlargement. G. M. MUREN. *Urol. & Cutan. Rev.*, 1913, xvii, 137.

Iodipin per clysmas in prostatitis. FISCHER. *München. med. Wchnschr.*, 1913, lx, No. 12.

Tuberculosis of the prostate gland. ARTHUR GÖTZL. *Folia urol.*, Leipzig, 1913, vii, 399.

Diagnosis of prostatic hypertrophy. PERRY BROMBERG. *J. Tenn. St. M. Ass.*, 1913, vi, 435.

Symptomatology and pathology of prostatic hypertrophy. E. O. SMITH. *Lancet-Clin.*, 1913, cix, 255.

Treatment of prostatic hypertrophy. PAUCHET. *Rev. méd. d'Egypte, Cairo*, 1913, i, No. 3.

Surgery of atrophied prostate. H. L. POSNER. *Ztschr. f. Urol.*, 1913, vii, 277.

Prostatectomy in two stages. LEGUEU. *Clinique, Par.*, 1913, viii, No. 11.

Prostatectomy — suspension of the bladder. GEO. E. ARMSTRONG. *Canad. M. Ass. J.*, 1913, iii, 167.

The after-treatment of suprapubic prostatectomy. G. KOLISCHER. *Surg., Gynec. & Obst.*, 1913, xvi, 332.

A procedure for the free extirpation of cancer of the prostate. GAYET, CHAMPEL, and FAYOL. *J. d'Urol., Par.*, 1913, iii, No. 3.

Some practical considerations in prostatic surgery. WM. M. WISHARD. *Colo. Med.*, 1913, x, 72.

Spontaneous gangrene of the genital organs in man and in woman. SPILLMANN, THIRY, and BENECH. *Paris méd.*, 1913, ii, No. 13.

Miscellaneous

The procedure of X-ray treatment of affections of the urinary organs. M. IMMEIMANN. *Bibl. d. physikal.-med. Techn. v. Berl.*, 1913, vi, 1.

Clinical and serological investigations in pyuria due to bacterium coli. COHN and REITER. *Berl. klin. Wchnschr.*, 1913, l, 441.

Lipoma of the perineum. V. SAVIOZZI. *Riv. osp.*, 1913, iii, 245.

A case of granuloma venereum and its cause. MARTINI. *Arch. f. Schiffs-u. Tropen-Hyg.*, 1913, xvii, 160.

The technique of collargol-X-ray photography. CARL SCHRAMM. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 36.

A case of pseudohermaphroditism. PAUL OLIVER. *J. Am. M. Ass.*, 1913, lx, 825.

The only way to know gonorrhœa is cured. H. A. MOORE. *Indianapolis M. J.*, 1913, xvi, 99.

SURGERY OF THE EYE AND EAR

Eye

A study of the orbit and other cavities. BORDAS. *Rev. de cienc. med. de Barcelona*, 1913, xxxix, No. 2.

Disturbances of vision in affections of the cerebellum. OTTO MAAS. *Neurol. Zentralbl.*, 1913, xxxii, 405.

Ocular injuries. C. B. WYLIE. *J. Tenn. St. M. Ass.*, 1913, vi, 451.

Two rare cases of injury to the eyes — subeon-junctival luxation of the lense and symmetrical iridodiolysis of both eyes. A. LEONOFF. *Sibirische Ärzte-Ztg.*, 1913, vii, 72.

The removal of foreign bodies from the cornea and conjunctiva. C. H. MAY. *Med. Press & Circ.*, 1913, cxlvi, 330.

Demonstration of the presence of any localization of heavy foreign bodies in the eye by X-rays. MARTIN HAUDEK. *Ztschr. f. Augenheilk.*, 1913, xxix, 231.

Clinical and experimental researches on intra-ocular drainage; a preliminary report. M. J. SCHOENBERG. *Arch Ophth.*, 1913, xlii, 117.

Scleral decompression in the treatment of intra-ocular tension. J. M. RAY. *Ky. M. J.*, 1913, xi, 149. [100]

The effect of chronic glaucoma on the central retinal vessels. F. H. VERHOEFF. *Arch. Ophth.*, 1913, xlii, 145. [100]

The management of acute hæmorrhagic glaucoma with advanced arteriosclerosis. F. G. RITCHIE. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 96. [101]

The surgical treatment of glaucoma with special reference to the substitutes for iridectomy. I. O. DENMAN. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 105. [101]

The trephine operation for glaucoma, with exhibition of patients. W. R. PARKER. *Phys. & Surg.*, 1913, xxxv, 103. [101]

Some points in the history and pathology of trachoma and a new treatment for chronic trachoma. G. J. JOHNSON. *Transvaal M. J.*, 1913, viii, 174. [101]

Infectious suppurative keratitis. E. A. LA MOTHE. *Ophth. Rec.*, 1913, xxii, 117. [102]

A case of hydatid cyst of the orbit. KRIVANOSOFF. *Kazan. med. J.*, 1913, xii, No. 5.

Fibro-angioma of the orbit. O. SHIRMER. *Am. Med.*, 1913, xix, 191.

A cyst of the conjunctiva. O. H. SMITH. *Mass. M. J.*, 1913, No. 3, 94.

Report of a case of conical cornea successfully treated by the actual cautery. W. C. POSEY. *Arch. Ophth.*, 1913, xlii, 141. [102]

Dystrophia epithelialis corneæ. R. G. REESE. *Ophth. Rec.*, 1913, xxii, 131. [102]

The operation for senile cataract. J. E. JENNINGS. *J. Mo. St. M. Ass.*, 1913, ix, 293.

A case of eversion of the pigment layer of the iris. R. HACK. *Arch. Ophth.*, 1913, xlii, 170.

The employment of Beck's paste for facilitating the extirpation of the lachrymal sac. VAN LINT. *Policlin.*, Bruxelles, 1913, xxii, No. 4.

Traumatic enophthalmos. A. DUTOIT. *Cor.-Bl. f. schweiz. Ärzte*, 1913, xlii, 398.

The rods as color-perceptive organs. V. O. SIVEN. *Arch. Ophth.*, 1913, xlii, 156.

Case showing the result of peritomy. ANDREW CRITCHETT. *Proc. Roy. Soc. Med.*, 1913, vi, 61.

Metastatic purulent ophthalmia (endophthalmitis septica). F. W. ALTER. *Ohio St. M. J.*, 1913, ix, 123. [103]

The optic disks in purulent otitic disease and its complications. E. GRUENING. *Arch. Ophth.*, 1913, xlii, 153.

Retro-ocular abscess which originated in the maxillary sinus. LASAGNA. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1. [103]

Gonorrhoeal ophthalmia treated with gonococcus vaccines. W. K. MITTENDORF. *Med. Rec.*, 1913, lxxxiii, 428.

The depth of the eye in otitic intercranial complications. FERRI. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

The needs of the eye, ear, nose and throat surgeon in general hospitals. FRANK ALLPORT. *J. Tenn. St. M. Ass.*, 1913, vi, 457.

Ear

Improvement in the hearing of patients who have under-gone a radical cure by the insertion of an artificial tympanum. SUTTICH. *Beitr. z. Anat., Physiol., Pathol. u. Therap. d. Ohres., d. Nase u. d. Halses*, 1913, vi, No. 3.

Sporadic congenital deafness from syphilis. J. K. LOVE. *Glasgow M. J.*, 1913, lxxix, 172.

Deep peri-auricular epithelioma. A. MORELLE. *Ann. de l'inst. chir. de Bruxelles*, 1913, xx, 74.

Tuberculosis of the ear. OERTEL. *Ztschr. f. ärztl. Fortbild.*, 1913, x, 167.

Plastic operation for congenital malformation of the auditory organ. KOSOKABE. *Arch. Ohrenh.*, 1913, xc, No. 3.

Suppurative otitis media. J. R. WRIGHT. *Louisville M. J.*, 1913, xix, 300.

Acute suppurative otitis media. W. T. McCURRY. *J. Ark. M. Soc.*, 1913, ix, 229.

Suppuration of the middle ear and amyloid degeneration. GROSSMANN. *Beitr. z. Anat., Physiol., Pathol. u. Therap. d. Ohres., d. Nase u. d. Halses*, 1913, vi, No. 3.

Suggestions to the general practitioner concerning the subject of acute middle ear suppuration. C. W. MACKENZIE. *Hahneman. Month.*, 1913, xlviii, 175.

The favorable effects exerted upon nervous conditions

by the cure of chronic suppurative inflammation of the middle ear, with some oto-therapeutic remarks. EITELBERG. *Wien. med. Wchnschr.*, 1913, lxiii, No. 13.

Chronic purulent otitis media, abscess of the temporo-sphenoid lobe and of the cerebellar hemisphere; thrombophlebitis of the left lateral sinus; purulent cerebro-spinal meningitis. EGIDI. *Rev. osp.*, Roma, 1913, ii, No. 5.

Some practical points in the diagnosis and treatment of acute and chronic aural suppuration and their sequelæ. JAS. F. McKERNON. *Buffalo M. J.*, 1913, lxviii, 452.

A suggestion on phenol and ichthyol in external otitis. R. M. NELSON. *J. Am. M. Ass.*, 1913, lx, 742. [104]

Primary acute mastoiditis. DE SANTALO. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Serous cysts of the mastoid process. C. BREYRE. *Ann. de la soc. med.-chir. de Liege*, 1913, lii, 17.

A contribution to the infant temporal bone in its relation to the mastoid operation. H. B. BROWN. *Bull. Lying-In Hosp.*, N. Y., 1913, ix, 11. [104]

Tibial bone transplantation in the post-operative mastoid wound. M. J. BALLIN. *Med. Rec.*, 1913, lxxxiii, 372. [104]

Lesions of the labyrinth in tumors of the cerebellum and the ponto-cerebellar angle. LANGE. *Arch. f. Ohrenh.*, 1913, xc, No. 3.

Progress in prophylaxis, diagnosis, and treatment of affections of the labyrinth. MÜLLER. *Klin.-therap. Wchnschr.*, 1913, xx, No. 11.

Clinical manifestations of suppuration of the labyrinth of the ear. W. UFFENHORDE. *Würzb., Kabitsch.*, 1913.

Ligature of the jugular vein in otogenous pyæmias. M. ROSENBLAT. *Monatschr. f. Ohren-, Hals- u. Nasenkrankh.*, 1913, viii, 53.

Generalized septic affections of otic origin; the disease picture of pyæmia. ELLA WOLF. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege*, 1913, lxvii, 89.

Otitic meningitis. W. M. MOLLISON. *Guy's Hosp. Gaz.*, 1913, xxvii, 129.

Cavernous sinus thrombosis; with report of two cases. ADAIR DIGHTON. *Practitioner, Lond.*, 1913, xc, 562.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Ear, nose, and throat in general practice. HUGH P. COSTOBADLE. *Practitioner, Lond.*, 1913, xc, 579.

Ungainly noses; their surgical correction without external scars. BOURGET. *Toulouse méd.*, 1913, xc, No. 4.

A rare case of rhinolith. W. M. IWANOFF. *Ärzte-Ztg.*, 1913, xx, 343.

Leishmaniosis (oriental sore) of the nasal mucosa. L. B. BATES. *J. Am. M. Ass.*, 1913, lx, 898.

Lupus of the nasal mucous membrane. WALB. *Disease med. Wchnschr.*, 1913, xxxix, No. 6.

Nerve supply of inferior turbinal as shown by vital staining. T. W. E. ROSS. *J. Laryngol., Rhinol. & Obst.*, 1913, xxviii, 57. [106]

Deviated nasal septum—its influence on the general health: surgical treatment. A. C. MAGRUDER. *Colo. Med.*, 1913, x, 82.

Foreign bodies in the naso-pharynx. CHAVANNE. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Diffuse massive hyperostosis of the nasal skeleton.

JACQUES. *Rev. hebdom. de laryngol., d'otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 12.

Osteoma of the ethmoid bone operated by the procedure of Moure. ESCAT and BONZOMS. *Rev. hebdom. de laryngol., d'otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 9.

An efficient and easily removable nasal packing. E. FLETCHER INGALLS. *Illinois M. J.*, 1913, xxiii, 249. [106]

The diagnosis and conservative treatment of disease of the nasal sinuses. HAROLD HAYS. *Med. Rev. of Rev.*, 1913, xix, 156.

Five cases of frontal sinusitis. LABARRIERE. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Disease of the nasal accessory cavities. SEYMOUR OPPENHEIMER. *N. Y. M. J.*, 1913, xcvi, 537.

Relation of accessory sinus diseases to that of the eye. WILBUR N. LINN. *Clinique*, 1913, xxxiv, 135.

Suppuration in the nasal sinuses. CHARLES W. M. HOPE. *Practitioner, Lond.*, 1913, xc, 547.

Diffuse osteomyelitis from nasal sinus. D. MCKENZIE. *J. Laryngol., Rhinol. & Otol.*, 1913, xxviii, No. 3.

Treatment of suppurating affections of the accessory sinuses of the nose. MÜHLEN. *St. Petersburg. med. Ztschr.*, 1913, xxxviii, No. 4.

The treatment of acute inflammation of the accessory sinuses. J. J. LA SALLE. *Ohio St. M. J.*, 1913, ix, 125.

A malignant tumor of the accessory cavities of the nasal fossa which had invaded the naso-pharynx. SEDZIAK. *Med. i kron. lek.*, Warszawa, 1913, xlviii, Nos. 9 & 10.

A case showing restoration of the entire nose by rhinoplasty and bone transplantation. WM. H. CARTER. *J. Am. M. Ass.*, 1913, lx, 728. [106]

Rhinoplasty. C. A. McWILLIAMS. *J. Am. M. Ass.*, 1913, lx, 730. [106]

Exhibition of specimens from a case of suppuration of the antrum due to *aspergillus fumigatus*, with a short note of the case. D. HARMER. *Proc. Roy. Soc. Med.*, 1913, vi, 91. [107]

Stone in the antrum of Highmore. N. B. CARSON. *Interst. M. J.*, 1913, xx, 242.

Minor surgery in oto-rhino-laryngology. NORREGAARD. *Ugesk. f. Laeger, Kjöbenh.*, 1913, lxxv, No. 13.

Islands of cartilage and bone upon and in the tonsils. GRÜNWALD. *Arch. f. Ohrenh.*, 1913, xc, No. 3.

Intra-cryptic papillomatous lesions of the tonsil. HADAL. *Rev. hebdom. de laryngol., d'otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 12.

Two cases of tonsillectomy. T. G. ORR. *J. Am. M. Ass.*, 1913, lx, 742.

A proposal respecting severe hæmorrhages after tonsillectomy. ARNALDO MALAR. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 313.

A method of tonsillectomy by means of the alveolar eminence of the mandible; a new guillotine and a snare. G. SLUDER. *J. Am. M. Ass.*, 1913, lx, 650.

The treatment of adenoids and tonsils. E. WARD. *Practitioner, Lond.*, 1913, xc, 567.

Adenoids. W. E. REILY. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 117. [107]

Röntgenographic representation of changes in the form of the epipharynx. M. E. LANDO. *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, 1913, xlvii, 258.

Three new cases of angina Ludovici. RECLUS. *J. d. praticiens, Par.*, 1913, xxvii, No. 10.

Angina Ludovici. JOLY. *J. d. praticiens, Par.*, 1913, xxvii, No. 12.

Direct endoscopic examination of the larynx, trachea, and bronchi; technique, indications, and results. G. BURGUES. *These de doct.*, Montpellier, 1913.

Decanulation and extubation after tracheotomy and intubation respectively. C. JACKSON. *Tr. Am. Laryngol. Ass.*, 1913, May. [108]

Congenital membrane of the larynx. G. W. BADGROW. *Proc. Roy. Soc. Med.*, 1913, vi, 66. [109]

Iodine treatment of tuberculous ulcerations in the larynx and fauces. OHNMACHT. *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, 1913, xlvii, 296.

The treatment of laryngeal tuberculosis. ADOLPH O. PFINGST. *Louisville M. J.*, 1913, xix, 289.

Extirpation of the vocal cords in laryngeal stenosis. IWANOFF. *Monatschr. f. Ohren- Hals- u. Nasenkrankh.*, 1913, viii, 6.

Direct laryngoscopy and autostatic ortholaryngoscopy. LEROUX. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Excision of larynx for malignant disease. J. B. NASH. *Austral. M. Gaz.*, 1913, xxxiii, 211.

Hemilaryngectomy by the lateral path. RUEDA. *Rev. de Med. y. Cir. pract.*, Madrid, 1913, xxxvii, No. 1257.

Cleft palate operation; results as demonstrated upon dogs' palates. GEO. V. I. BROWN. *Lancet-Clin.*, 1913, cix, 316.

Dental cyst in a child of eleven years; extirpation; recovery. BRAU-TAPIS. *Gaz. hebdom. d. sc. méd. de Bordeaux*, 1913, xxxiv, No. 9.

Malignant disease of the tongue and mouth. ROBERT ABBE. *Med. Rec.*, 1913, lxxxiii, 461. [109]

Teeth growing in the nasal fossa. E. H. GRIFFIN. *Med. Rec.*, 1913, lxxxiii, 389.

Some dental aspects in rhinology. J. H. GIBBS. *J. Laryngol., Rhinol. & Otol.*, 1913, xxviii, No. 3.

Anatomical changes in the lower jaw in a case presenting several anomalies in the position of the teeth; röntgenological findings. FRIEDRICH HAUPTMEYER. *Deutsche Monatschr. f. Zahn heilk.*, 1913, xxxi, 153.

A large foreign body in the mouth. MILÁČEK. *Čas. lék. česk.*, 1913, lii, 212.

A case of multiple fibrosarcomata of the fauces. OKI-UEFF. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Dermoids of the floor of the mouth, their development, diagnosis and treatment. HASSEL. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 2.

Lupus of the tongue and of the larynx. HEINO HARMS. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, v, 1049.

Phlegmona of the tongue and their relation to the so-called "angina Ludovici." KUTVIRT. *Čas. lék. česk.*, 1913, lii, 119, 174, 198 and 233.

A clinical demonstration of cases of cancer of the tongue. C. ROWNTREE. *Clin. J.*, 1913, xli, 374.

Cancer of the tongue as a secondary condition in a case of epidermolysis bullosa. KLAUSNER. *Arch. f. Dermatol. u. Syphilis*, 1913, Orig. cxvi, 71.

Cancer of the tongue in young subjects. GORSE and DUPOUCH. *Rev. de chir., Par.*, 1913, xlvii, 293. [109]

Ear, Nose and throat in general practice. HUGH P. COSTOBADLE. *Practitioner, Lond.*, 1913, xc, 579.

Ungainly noses; surgical correction without external scars. BOURGUET. *Toulouse méd.*, 1913, xv, No. 4.

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Lupus of the nasal mucous membrane. WALB. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 6.

Nerve supply of inferior turbinal as shown by vital staining. T. W. E. ROSS. *J. Laryngol., Rhinol. & Otol.*, 1913, xxviii, 57.

Deviated nasal septum—its influence on the general health; surgical treatment. A. C. MAGRUDER. *Colo. Med.*, 1913, x, 82.

Foreign bodies in the naso-pharynx. CHAVANNE. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Diffuse massive hyperostosis of the nasal skeleton. JACQUES. *Rev. hebdom. de laryngol., d'otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 12.

Osteoma of the ethmoid bone operated by the procedure of Moure. ESCAT and DONZOMS. *Rev. hebdom. de laryngol., otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 9.

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Five cases of frontal sinusitis. LABARRIERE. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 1.

Diseases of the nasal accessory cavities. SEYMOUR OPPENHEIMER. *N. Y. M. J.*, 1913, xcvi, 537.

Relation of accessory sinus diseases to that of the eye. WILBUR N. LINN. *Clinique*, 1913, xxxiv, 135.

INTERNATIONAL ABSTRACT OF SURGERY

AUGUST, 1913

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

ANÆSTHETICS

Gatch, Gann and Mann: The Danger and Prevention of Severe Cardiac Strain During Anæsthesia. *J. Am. M. Ass.*, 1913, lx, 1273.
By Surg., Gynec. & Obst.

The authors have shown by animal experimentation the various factors causing heart strain during anæsthesia. These factors are struggling, pressure on the abdominal viscera, and the Trendelenburg position, the latter being the most important. The conclusion is reached, however, that these agencies are harmless to normal hearts providing the breathing is adequate to prevent cyanosis.

Experiments on dogs under ether anæsthesia were striking. Only four of fifteen dogs lived in the Trendelenburg position over one and one quarter hours unless revived by artificial respiration, the average time of survival being twenty minutes. The same results always followed the change in position: slight rise in blood pressure, slight increase in the pulse rate and increasingly labored respirations, finally ceasing. In the authors' opinion death is due to the sensitiveness of the respiratory center to ether. As long as the breathing is good, the animal withstands the head-down position without ill effects, but when the breathing fails, the heart, poorly supplied with oxygen, has to pump a blood supply made greater by gravity against a blood pressure increased by asphyxia. Reasoning that if primary failure of respiration was responsible for the ill effects of the head-down position, this may be obviated by hypercapnia, which was found to be true.

In a series of experiments with the thorax open, the heart could be revived by massage and artificial respiration, but though apparently normal, there was evidence of more or less permanent serious injury to the cardiac muscle. After a second stop-

page of artificial respiration, its contractions ceased in less than two minutes. During struggling under light anæsthesia, the heart could be seen to balloon out to a great size and soon ceased to contract.

These phenomena explain why the Trendelenburg position has no ill effect in a normal heart, with the respiration adequate and the muscles at rest. But when the breathing becomes inadequate during anæsthesia, the mechanism by which the body compensates for the effects of gravity on the circulation becomes deranged. Asphyxia injures the cardiac muscle and raises blood pressure, while the Trendelenburg position causes an increased amount of blood to be quickly returned to the heart. This cardiac strain is greatly augmented if there is pressure on the intestines, Roy and Adami having found that abdominal compression increases the heart's output 29.6 per cent.

The problem in practical anæsthesia is to minimize the dangers of these agencies: the head-down position; struggling and abdominal pressure, which in the absence of asphyxia probably cannot injure the normal heart. The following suggestions are made:

The patient should be raised to and lowered from the Trendelenburg position slowly. In cardiac disease it should be used with caution.

Robust patients should be given morphine before operation, and alcoholics morphine and alcohol and should be anæsthetized without cyanosis.

Those with cardiac disease, pneumonia or empyema should also be given morphine and anæsthetized slowly in the semi-recumbent position.

The production of hypercapnia protects in a marked degree from respiratory failure and consequently from cardiac failure, which is always secondary to asphyxia.

E. K. ARMSTRONG.

Sprengel: The Choice of an Anæsthetic in Operations for Acute Inflammatory Conditions of the Abdomen (Die Wahl des Narkoticums bei Operationen wegen akut entzündlicher Prozesse in der Bauchhöhle). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Sprengel discusses the condition described by Reichel in 1900 and by Amberger in 1909 and called by them post-operative sepsis. The symptoms are icterus, restlessness, lethargy and finally coma, generally ending in death. Recovery is exceptional. He has seen a great number of cases in the acute stage after operations for appendicitis, and believes with Sippel, Stierlin and others, that the original explanation of the clinical picture and its anatomical basis (fatty degeneration of the heart, kidneys, and especially the liver) was not satisfactory and that it is in reality an after-effect of chloroform. After he reached this conclusion he stopped giving chloroform in operations for acute inflammations in the abdomen, and since that time (October, 1911) he has not seen a single case, while from February to the end of September, 1911, he had six cases, three of them ending fatally. He maintains that chloroform is absolutely contra-indicated in these conditions, and recommends the use of morphine-ether anæsthesia as being without danger.

Bainbridge: Spinal Analgesia; Development and Present Status of the Method; with Brief Summary of Personal Experience in 1,065 Cases. *Med. Press & Circ.*, 1913, cxlvi, 334.

By Surg., Gynec. & Obst.

Bainbridge notes that this method of anæsthesia, like all new methods, had its early errors. Then enthusiasm over its application began to wane, and the later development was left to a limited number who recognized its advantages and usefulness.

The author's method of sterilizing cocaine and similar drugs is as follows: To five grains of fresh cocaine crystals two drams of strong ether are added and mixed thoroughly with a glass rod until a paste is formed and stirred until the ether is evaporated. One ounce or $\frac{1}{2}$ ounce of boiled filtered water or physiological salt solution is then added, making respectively a 2 per cent or a 1 per cent solution, and from 5 to 25 minims of the strong solution and from 10 to 40 of the weaker solution is the dose.

Other drugs besides cocaine having become avail-

able for spinal analgesia, three general classes of solutions have been evolved: (1) those of a specific gravity lighter than the cerebrospinal fluid, the diffusible solutions, in which alcohol is used to give this gravity; (2) those with a specific gravity approximately equal to the spinal fluid, to which the simple solutions in water, in physiological salt solution or in spinal fluid, belong; and (3) the "non-diffusible" or heavy solutions with glucose, dextrin or gum arabic.

In 988 of the 1065 cases, solutions in sterile water were used, and in over 500 of these cocaine was the drug. As a rule, Bainbridge now uses stovaine or tropacocaine, but does not hesitate to use cocaine. In all his cases there was only one death (diffusible stovaine solution) and this was probably from status lymphaticus, one case of temporary partial paralysis with recovery, one case of failure due to "dry spine," two cases with alypine in which there was respiratory repression, and one case of idiosyncrasy with no analgesia after several attempts.

Preliminary preparation of the patient is not so essential except in intestinal operations. Emergency cases have been operated on with comparatively no post-operative phenomena. Morphine may be given before anæsthesia, and strychnine plus nitroglycerine lessens disagreeable symptoms.

The author usually injects between the 4th and 5th or 3rd and 4th lumbar vertebræ. Ethyl-chloride or cocaine subcutaneously is used, an incision is made in the skin, and the needle is inserted through the dura. If the cerebrospinal fluid does not flow freely, the needle is withdrawn and reinserted. The solution is injected slowly. The body of the vertebra in front should not be touched with the needle because of the presence there of a large plexus of blood vessels. The position of the patient and the specific gravity of the solution must be taken into consideration according to whether high or low analgesia is desired. The author believes that head and neck operations should not be undertaken under spinal anæsthesia unless other methods are contra-indicated or operation essential.

The indications for spinal analgesia are the contra-indications for inhalation anæsthesia. The objections to spinal analgesia are: (1) The operator is absolutely committed to the dose given. It may be increased but not decreased. (2) In prolonged operations, the analgesic effect may pass before operation is completed.

W. H. BÜHLIG.

SURGERY OF THE HEAD AND NECK

HEAD

Basham: Temporo-Maxillary Ankylosis. *Interst. M. J.*, 1913, xx, 331.

By Surg., Gynec. & Obst.

The paper is limited to a short discussion of those cases of ankylosis of the temporo-maxillary joint due to a change in the articulating surfaces of the

temporo-maxillary joint itself. Those due to cicatricial contraction of muscles, etc., are not considered. Ankylosis of this joint is nearly always due to an infectious arthritis. Basham mentions arthritis sicca as an occasional cause. Otitis media, parotiditis and osteitis affecting the body of the maxilla may cause an infection of the temporo-

maxillary joint. According to Duploy and Reclus gonorrhœa is a frequent cause of arthritis in this joint. Before the present days of surgery many and varied barbarous instruments were contrived to force apart the jaws. The author gives a brief résumé of the different types of operations devised to bring back motion in these cases. Most of these usually caused damage to the facial nerve. The operation of Lillienthal is the safest and is the one the author used in his case reported.

The author reports a case of a school girl who, in the autumn of 1909, had had typhoid of a severe type. She was left with ankylosed jaws and mastication was impossible. On September 2, 1911, Basham operated on her right side first. A chisel was used to open the joint and a curette was used to clear away the adventitious bony tissue, operating mostly at the expense of the maxillary condyle. Adhesions about the joint were well broken up. A piece of temporal fascia was divided so as to leave the attachment to the inner border of the root of the zygoma undisturbed and it was passed across the articulation between the glenoid fossa and the condyle and stitched with fine catgut. The section of the zygoma was replaced and the wound closed. Eleven days later the same operation was done on the other side. The jaws could now be separated widely with little difficulty. Within two or three days the patient could drink water from a glass and from this time on movement of the jaws was encouraged. A hard rubber interdental wedge was provided to wear between the teeth for a few hours daily. The patient still remains well.

M. S. HENDERSON.

Freligh: A Preliminary Report on the Temporal Bone and Its Anomalies at Birth in One Hundred and Fifty Cases. *Bull. Lying-in Hosp.*, 1913, ix, 3. By Surg., Gynec. & Obst.

Freligh made extensive anatomical studies of the temporal bones of one hundred and fifty cases. He gives exact measurements of the different anatomical parts with a few references to their importance from the standpoint of the surgeon. He states that there is neither an eminentia articularis in the temporal bone of the new-born nor a distinct mastoid process. The lowest external portion of the temporal bone is the inferior border of the anulus tympanicus. It is important to know that the tegmen antri is very thin and since the antrum mostly goes over the tympanum, the tegmen tympani is also very thin. The bony external auditory meatus and the bony canal are entirely missing, so that with the soft parts removed one comes directly upon the drum membrane. The horizontal canal protrudes into both antrum and tympanum and is therefore easily injured during an operation if one is not fully acquainted with these anatomical details. Both the tympanum and the semicircular canals appear to be about as large as in the adult. The description of the course and the measurements of the distances from different anatomical points

show that there are great variations in the exit from the mastoid bone.

The statement given in the textbooks of anatomy that the mastoid bone or the equivalent in new-born children does not contain cells is corrected by Freligh, who found comparatively large cells in a considerable percentage of cases. EMIL SCHWARZ.

Barrett: Diffuse Glioma of the Pia Mater. *Am. J. Insan.*, 1913, lxi, 643. By Surg., Gynec. & Obst.

The author describes the brain of a man 40 years old who had shown grave mental symptoms during the last four months of life. The tumor was a large glioma growing in the subependymal substance in the right occipito-temporal region. It invaded the adjacent pia mater and also the pia of the greater part of the brain, cerebellum, cranial nerves, pons, medulla, and at least the upper part of the spinal cord. The tumor had pushed in among the fibres of the pia mater in places and lay in the subarachnoid space. From the spaces of the pia, glioma cells had invaded the lymph spaces of the adventitia of the blood vessels and extended deeply into the substance of the brain. In places these had broken through the vessel walls and formed focal metastases in the perivascular area.

The author calls attention to the infrequency of glia tumors which invade the leptomeninges of the central nervous system, so diffusely.

In this case dissemination occurred very largely through the lymph spaces of the blood vessels. There was also direct invasion of the brain substance from the infiltration of the pia. The tumor was an exception to the statement of Bruns that gliomata are solitary tumors which do not form metastases.

BARNEY BROOKS.

Hudson: Consecutive Displacement of the Cerebral Hemisphere in the Localization and Removal of Intracerebral Tumors and Hæmorrhages. *Ann. Surg.*, Phila., 1913, lvii, 492.

By Surg., Gynec. & Obst.

The author has based the development of his technique upon a principle discovered and developed by him from a case of subcortical brain tumor terminating fatally within forty-eight hours after it had been operated upon. Decompression had been done at the first operation for a tumor involving the motor cortex and from which the symptoms were in no way distressing. Intracranial pressure, however, was found to be great. No tumor could be located by most careful palpation and the brain was not incised to search for it, as that should be left, as a rule, until the second operation. The patient died within forty-eight hours and at post-mortem two conditions, especially, were noted: first, the cerebral hemispheres had been greatly damaged by being forced into the operative opening; second, the tumor, located about three quarters of an inch below the cortex, became palpable with the finger tips when tension had been released by removing the brain from the skull.

The author maintains that surgery of the cerebellum has been transformed from an unpromising to a promising field by using the principle of releasing pressure in the entire cerebellar fossa.

One successful operation for intracerebral hæmorrhage is reported and the statement is made that by the use of the above principle and an improved instrument armamentarium many successful operations for intracerebral hæmorrhage may be done.

A very large part of the success of these brain operations depends upon a rapid and perfected technique. The article is concluded by a close description of the author's own methods and also of the instruments, many of which are entirely new.

FLOYD RILEY.

Dennis: Bilateral Cerebral Abscess Involving the Motor Areas. *St. Paul M. J.*, 1913, xv, 153.
By Surg., Gynec. & Obst.

The case reported is that of a young man of eighteen, first seen while suffering from a localized left-sided pyopneumo-thorax communicating with a bronchus. Nineteen days after drainage of this condition the patient had an attack of aphasia, followed in the next few days by others, to which were added general convulsions and transient right hemiplegia. Twenty-eight days after the drainage operation a general convulsion was followed by bilateral hemiplegia, which cleared up on the left side.

A left osteoplastic flap was raised some days later and an abscess beneath the ascending frontal convolution drained. The following day he could move both legs and the right hand. Death ensued in three days and autopsy revealed another abscess in the corresponding motor region of the right side, as well as one in the silent area in the left frontal lobe. The cavity of the drained abscess was obliterated and there was no meningitis. The presence of a second abscess on the right side had been considered probable, but operation was not done because of the bad condition of the patient and because of the contrary opinion that the left-sided paralysis was due to an extension toward the base.

The following points may be emphasized:

(1) Cerebral abscess is very frequently second to a thoracic focus.

(2) In about one-half the cases, according to Krause, the abscess is solitary.

(3) The point of lodgment is usually along the course of the artery of the fissure of Sylvius.

(4) It is a striking and unexplained fact that emboli originating in the lung tend to lodge in the brain, while those from the cavity of the heart do not.

Paralysis resulting from the causes under consideration may disappear and recur at least two or three times, due undoubtedly to the effect of œdema and pressure preceding absolute destruction. Every definitely localized brain abscess should be drained. The diagnosis of a second abscess must be considerably less certain than that of the first. In some instances even involving the motor area, the determination of side of the lesion is impossible, as evi-

denced by two cases reported and verified by autopsy in which the lesion was on the same side as the hemiplegia. No explanation for this unusual condition has been advanced.

Rodman: Report of Cases Illustrating Certain Phases of Cerebro-Spinal Surgery. *Penn. M. J.*, 1913, xvi, 432.
By Surg., Gynec. & Obst.

The conclusions as to preparation for, technique of, and indications for operations on the brain and cord are based upon 15 cases in the author's experience, only 2 of which are reported in detail.

In the preparation of neurological cases for operation, urotropin has been given as a routine measure, and avoidance of all infection is attributed to this. Overpurgation and morphine are undesirable.

The most important factor in the prevention of shock is hæmostasis, and with this in view a tourniquet is employed. Hand-driven instruments are thought to be safer than electrically driven osteotomes, although they are slower. Frequent blood pressure readings are taken during the operation, and a sudden fall is indicative of approaching collapse. Should collapse intervene or an extensive operation be necessary, a two-step procedure is considered advisable.

One case of enormous extradural hæmorrhage with hemiplegia, whose occurrence is considered rare by Cushing, was followed by complete recovery after evacuation of the clot. In this instance an osteoplastic flap proved so satisfactory that the author believes it should always be used in exposing clots from the middle meningeal artery. Another case of inoperable tumor was almost completely relieved by a subtemporal decompression, which operation, although only palliative, has definite indications, undoubted value, and a low mortality, but should only be part of an exploration wherever possible. All cases, however, in which this operation was done were not so fortunate, but the improvement following exploration has been so great that such operations seem to offer the greatest chance of temporary comfort to the patient. Suboccipital decompression should not be done unless there be strong evidence of a subtentorial lesion, because of its difficulty and greater mortality.

Surgery of the cord offers the same difficulties as that of the brain. The approach is best done by simple laminectomy. From Allen's recent work on dogs, decompression of the cord seems feasible to the author, while the removal of extradural and extramedullary tumors offers no difficulties.

E. K. ARMSTRONG.

Sweet and Allen: The Effect of the Removal of the Hypophysis in the Dog. *Ann. Surg.*, Phila., 1913, lvii, 485.
By Surg., Gynec. & Obst.

The authors discuss the results of a series of experiments carried on by them during the past year, which have to do with the essential character of the hypophysis. In twenty-two dogs, seventeen died at periods of from two to twenty-three days from

intercurrent disease or accident. Five dogs lived for months and showed no clinical symptoms peculiar to the operation, such as tremor or disturbance of gait.

The method of approach was through an incision two inches in length, perpendicularly over the zygoma. The zygomatic arch was removed, the coronoid process of the mandible resected and the base of the skull approached in a direct line. The skull was trephined and the opening enlarged, the dura opened and the brain elevated by a special retractor. The hypophysis was removed by a special loop forceps, which enabled the operator to remove the gland in two pieces, one for the anterior and one for the posterior lobe. No drainage was used. The Paulesio-Cushing incision was rejected because of the extensive removal of bone which exposed the brain to the action of the masseter muscles. An atypical course of a branch of the pterygo-palatine artery caused several failures due to hemorrhage.

They consider that the anatomy of the gland in the dog precludes complete histological removal of all the cells of the pars intermedia. They think that physiological removal, enough to produce characteristic changes, can be done, analogous to the removal of the pancreas, thyroid and parathyroids. Serial sections of blocks of tissue removed post-mortem, from optic chiasm to corpora mammillaria inclusive, demonstrated that only two dogs showed no remaining evidence of pars intermedia or anterior. The first change noted was a striking red coloration of the pancreas, which had the appearance of the gland at the height of digestion, but no microscopical changes were noted. Second, in point of time was atrophy of the genital apparatus, especially the testicles. Two dogs in which one testicle was removed at the time of operation showed marked atrophy of the remaining organ, due to complete loss of spermatogenetic cells. One dog which lived thirteen days showed no clusters of spermatozoa in Sertoli cells, nor free in lumen. Spermatozoa of first and second order were present in moderate quantity. The epididymis was crowded with spermatozoa. Thirdly, increase in weight; this comes on late and it is a question whether it is due to the removal of the gland directly or to loss of some function controlled by the hypophysis. In three dogs autopsied after several months the thyroid presented an increase in colloid and flattening of the cells of the alveoli.

They conclude that the hypophysis is not essential to life and that the three changes above noted undoubtedly follow its removal. Changes in pancreatic digestion were not studied. They are unable to say whether glandular rests or parts of the gland left behind can compensate for this atrophy of testicle. They agree with Aschner except in two particulars; that removal of the gland from adult animals is not without effect, and that atrophy of the testicles is due to removal of the tuber cinereum. The latter they consider purely an academic one. Their results cause them to believe

that the hypophysis is not essential to life. The essential or non-essential nature of the gland is an important surgical problem; that the only indication for removal is intra-cranial pressure. They think that the intra-cranial method of approach is preferable to any other; that Frazier's operation is the best anatomically and technically.

DONALD GORDON.

Meyer: New Formation of Nerve Cells in an Isolated Part of Nervous Portion of an Hypophysis Tumor in a Case of Acromegaly with Diabetes; with a Discussion of Hypophysis Tumors Found so Far. *Am. J. Insan.*, 1913, lxix, 653.
By Surg., Gynec. & Obst.

The paper is based on a clinical and post-mortem study of a single case. The patient was a woman of 52 years, who had had for six years typical acromegaly associated with a paranoiac condition. During the last year of her life she was known to have had a persistent glycosuria.

At autopsy the only lesion of importance was a tumor of the hypophysis. The structure and mode of propagation of the tumor is described by means of text and figures. At one point some of the nervous portion of the hypophysis had been in the process of "invasion or distention" completely isolated so as to form an "independent island of the nervous portion on the glandular tumor." In this island there was a "striking monstrosity of both glandular cells and cells of the nervous portion." "The glandular elements are larger and have a greatly increased number of nuclei." There was also unquestioned new-formed nerve cells with distinct Nissl bodies.

The author briefly reviews the descriptions in the literature of tumors of the hypophysis associated with acromegaly, and calls attention to the fact that even though the nomenclature differs very markedly, the descriptions show some uniformity. For the failure of more uniformity in descriptions, the author suggests an explanation in the first of his conclusions, which are as follows:

1. The changes in the hypophysis in acromegaly seem to be more constant than descriptive terms in the literature would suggest. The difference of opinion may be due in part to a limitation of the examination to one or a few portions of the tumor.
2. The change in this case is identical with that described by Harlow Brooks. It shows also the mode of propagation of the tumor.
3. In a sequestered part of the nervous portion unmistakable new formation of nerve cells with Nissl bodies has occurred, besides other monstrosities.

BARNEY BROOKS.

NECK

Sinjuschin: Tumors of the Carotid Gland (Über Geschwülste der glandula carotica). *Med. Rundschau*, St. Petersburg, 1913, lxxix, 34.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Sinjuschin gives a short account of the histogenesis of the tumors which, according to Paltauf and

Marchand, arise at the bifurcation of the common carotid artery from the carotid gland. According to the investigations of the zoölogist Kashtchenko, the carotid gland develops from the adventitia of the internal carotid and appears in the embryo as a simple thickening of the adventitia, consisting of loose connective tissue with cell nests. The alveolar form of the organ develops later. Histologically the gland consists of a capsule from which firm connective tissue septa penetrate into its substance. The spaces between the septa are filled with epithelioid cells with large nuclei and distinct chromatin structure, lying close to one another so that there is a direct transition from these so-called specific cells to the endothelium of the very numerous vessels. Of the twenty-five cases published since 1891, the author has operated successfully only two. Fifteen cases were in women, nine in men; seventeen times the tumor was on the left side, seven times on the right. The patients were between twenty-five and thirty years of age. The tumors were in the superior carotid triangle, and were as large as a goose-egg, tolerably hard, nodular, movable laterally but not up and down, and showed pulsation which ceased on pressure over the carotid.

The operation is not without danger, as the tumors are often firmly attached to the carotid or the vagus and frequently demand resection of the nerve or artery (in 20 of 25 cases). The tumors must be extirpated, for Kaufmann and Dobromys also have observed malignant degeneration and recurrence. The tumors can hardly be removed without at least temporary ligation of the carotid because of the severe hæmorrhage. Five good colored microphotographs and a bibliography close the article.

VON REYHER.

Smoler: Ligation of the Common Carotid (Zur Unterbindung der Carotis communis). *Beitr. z. klin. Chir.*, 1913, lxxxii, 404.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Ligation of the carotid communis has been known since the close of the 18th century. Hæmiplegia and convulsions occupy the central position of interest in connection with this procedure. According to Hartmann, these phenomena are not due to infection, nor have changes in the suture material brought about any improvement. Anæmia, and not embolism, seems to be the main cause of the softening. In 1878, Denucé first attained a cure without cerebral effects by slow and gradual ligation. The method suggested by Ceci and Boari, i. e., an accompanying ligation of the ven. jugularis int., did not avoid serious disturbances in the motor and sensory functions. The most practicable method of avoiding sudden anæmia is the gradual interruption of the blood stream. The technique for this procedure was worked out by Jordan in 1907, who has designated it as a "loose and temporary ligature of the carotid occupying some forty-eight hours, accompanied by local anæsthesia, which is required for the recognition of cerebral effects."

The following are absolute indications: Hæmorrhages which may be fatal, relatively definite cerebral diseases, such as epilepsy marked by increased brain pressure, neuralgia, hydrocephalus, and inoperable tumors. A review of ten cases proves the superiority of slow constriction (Drosselung) over direct and rapid ligation. Two cases which were not slowly ligated died of serious cerebral maladies, while the cases which were slowly ligated remained free.

Slow ligation was accomplished with rubber drains whose ends, outside of the wound, were gradually turned on a rod. However, slow ligation with rubber tubing is not practicable, because of the uncertainty attaching to the degree of twisting.

Ligation of the externa, before resection of the upper jaw, which has been recommended, was found in one case to be insufficient.

SCHLENDER.

Hagen-Torn: The Influence of Insufficiency and Atrophy of the Thyroid Gland on Diseases of the Joints (Über den Einfluss der Insuffizienz und Atrophie der Schilddrüse auf Erkrankungen der Gelenke). *Chir. Arch. Veliaminova*, 1913, xxix, 55.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses diseases of the joints which occur in connection with atrophy of the thyroid gland. From a study of ten cases, he concludes that in the physical examination of every rheumatic patient, attention should be given to the thyroid gland, especially in those cases where the gland is not enlarged. Careful observation should be made for the detection of subjective or objective symptoms of hypo- and hyperthyroidism. Cases of thyroid atrophy are frequently associated with joint disease. Administration of thyroid preparations improves the general condition and brings about a disappearance of the symptoms of hyperthyroidism. At the same time the pathological processes in the joints subside, even in cases with marked anatomical changes.

Complete recovery is possible as soon as normal thyroid function has been restored. The treatment must extend over a considerable period, as a premature cessation of treatment leads to recurrences of the joint symptoms. In obstinate cases, such as chronic articular rheumatism and arthritis deformans in which there is only temporary improvement under thyroïdin administration, transplantation of thyroid tissue is indicated, after the method of Christiani.

HESE.

Kutschera: Against the Water Etiology of Goiter and Cretinism (Gegen die Wasseretiologie des Kropfes und des Kretinismus). *München. med. Wchnschr.*, 1913, lx, 393.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of long years of study, in the Steirmark and the Tyrol, the author opposes the old and seemingly well established idea that water plays a part in the etiology of goiter and cretinism. He has widened the usual conception of cretinism to include all those bodily and mental developmental

disturbances occurring in the endemic regions and produced by the "cretinogenous" injury, regarding all of these as evidences of cretinous degeneration. These pictures vary from the normal to the severest conditions of hypothyreosis, idiocy and deaf-mutism. Goiter belongs to it, and there is no cretinism outside the goiter districts. The most constant injury produced in common by the endemic noxa is not the goiter, but injury to the nervous system. The agent has a strumous action, when it affects an adult, more resistant body, and a cretinous action on a child in its earliest years.

The author assumes, on the basis of his experiences, that the water theory of goiter is not tenable, because (1) the impression that goiter and cretinism is bound to certain districts has been shown to be erroneous; it was thought that the disease was so exquisitely chronic that its variations were developed only in decades and centuries; (2) goiter and cretinism are not evenly distributed among the inhabitants of the endemic districts, as would be demanded by the water theory, and the disease is not confined to the community, but to certain houses or dwellings, i.e., it is a house disease, like tuberculosis. Hence cretinism is a pronounced family affliction. It is not, however, hereditary, as the children of cretinous mothers may develop normally, provided they are

removed to a neighboring house free from goiter and cretinism. These and many older observations speak in favor of the view that the disease is transmitted by contact.

The author regards the results of his investigations on the formerly cretinous Tostenhuben at Vadans, his investigations in Tyrol and the experiences of other observers as convincing. The more exact investigations of goiter sources have shown that goiter endemics, especially the acute ones, were never related to the water supply but to the community of dwellings. (Examples noted by the author: young dogs supposed to be infected by a goitrous servant girl; and the well-known endemics in fish ponds.) The positive animal experiments may be explained easily by supposing that the animals in the endemic regions were infected by contact. A parallel to the author's view as to the etiology of goiter and cretinism is found in the Chagas disease, which is produced by the bite of an insect, which transmits a variety of trypanosome. From all his observations and reflections, the author is convinced that goiter and cretinism is a disease confined to the community of dwellings and transmitted by contact, possibly through some intermediary host; and it is not confined to the drinking water supply.

LOBENHOFFER.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Thomas: A Study of Empyema, with Special Reference to the Feasibility and Importance of Dependent Drainage. *Am. J. M. Sc.*, 1913, cxlv, 555. By Surg., Gynec. & Obst.

Thomas reports in detail nine cases of empyema. From a study of these cases and a formalin-hardened cadaver specimen of an empyema undisturbed by an opening during life, he draws a few inferences which are at variance with the generally accepted view. We have not appreciated the extent and nature of adhesion formation developing in connection with empyemas, especially the acute variety. The massive parietal type extends usually to the bottom of the normal pleural cavity, and is not unencysted or general, but completely walled off above from the rest of the pleural cavity by adhesions. This explains the slight mobility of the dullness on percussion, as well as the fact that the upper level of the dullness is not in a straight line as it should be if the fluid was unencysted and free to seek its own level. Skoda's resonance may not be due to relaxation of the lung above the pus, but to the fact that the functioning portion of the lung is doing compensatory work.

Adhesions between the lung and chest wall will not offer serious obstacle to re-expansion of the lung because they develop between parts normally in contact. That double empyema can be safely

opened on both sides at the same operation is to be explained by the fact that the air admitted does not produce total double pneumothorax, since it enters on each side only the firmly walled-off empyema cavity. Total collapse of the lung is prevented by the firm adhesions which protected the lung against the pus pressure before drainage. There is no sudden or dangerous change of pressure on the thoracic organs from the usual sudden evacuation of pus, but a general substitution of pus by air, which has a pressure of fifteen pounds to the square inch.

The so-called encysted or localized empyemas are small, probably because they develop in the fissures of the lung or between the lung and diaphragm, and therefore because of the difficulty with which the pus is diffused in these situations.

The most important factor in preventing the obliteration of the empyemic cavity and closure of the sinus is the pressure of the air admitted through the drainage opening into the empyemic portion of the pleural cavity, where it neutralizes the expanding effect of the air coming through the trachea. Murphy overcomes this completely by aspirating the pus and injecting a formalin-glycerin solution. The drainage methods still prevail. The ideal drainage method is that based upon the suction or siphon principle. The chief objection is that devices for applying it generally leak air around the tube. It is not yet determined how rapidly an empyemic cavity, an abscess, may be permitted to close.

The size of the drainage opening has an important bearing upon the later expansion of the lung. The lung probably can not expand until the entrance of air through the drainage opening is so diminished by contraction of the opening and blockage of the space in and around the tube by the escape of pus, that with absorption of the air already in the cavity there is developed a negative tension external to the lung to permit the normal internal pressure coming through the trachea to become greater than the external pressure. For this reason we cannot safely employ in empyemas the large drainage opening as in ordinary abscesses. The effect of the large opening in empyemas is shown after the Estlander operation by the permanent non-expansion of a considerable portion of the affected lung. An opening through the eleventh rib or interspace of a given size will drain more perfectly than one at the usual level, and will better prevent the entrance of air, since the pus will be constantly escaping and tending to fill the space in and around the tube. There will be little danger of the drainage tube falling into the empyemic cavity, since it must travel against gravity to do so, and if this accident happens the tube could probably be reached with a forceps. In some cases the much-thickened pleura is the result probably of organization of layers of fibrin deposited in the acute stage.

Of five massive empyemas treated with dependent drainage it may be said that the time necessary for a cure was less in all than the average determined by Schadler (14½ weeks) or the average in Fealey's cases (99 days), and therefore there were no persistent sinuses. In the nine cases there were no deaths. This method deserves further trial and study.

L. G. DWAN.

Lawrow: The Surgical Treatment of Pleural Empyema with Especial Reference to After-Treatment by Aspiration (Die chirurgische Behandlung des Pleuraempyems unter besonderer Berücksichtigung der Nachbehandlung mit Aspiration). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 67.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Aspiration after laparotomy with resection of the ribs corresponds to the physiological healing by lung expansion. In thirty-three cases, the author used the apparatus which was demonstrated by Nordmann in 1907 at the 36th Congress of the Deutsche Gesellschaft für Chirurgie and a description of which he gives. The author mentions a slight modification of his own in this apparatus, which consists in the attachment of a 4-5 cm. wide strip of rubber to that surface of the rubber plate which is turned toward the patient in such a way that it may be inflated. This avoids pressure and decubitus from the glass receiver. The apparatus is attached by means of gum arabic; if there is a pneumatic ring present, attachment should be made only to this. The drains which are introduced into the wound should be fastened to the edge of the rubber plate. After connecting the rubber aspirator,

negative pressure is begun. The apparatus may be allowed to remain for ten or twelve days, during which time the patient may leave his bed. According to the amount of secretion, bandages should be changed anywhere from daily to every fourth day. The defects of this apparatus are pressure by the receiver, the direct attachment of the rubber to the skin, and the facility with which the projection may be broken off from the receiver.

At first only slight negative pressure, 5-6 mm. hg. should be employed, and this should be gradually increased to a maximum of 120-150 mm. hg. With fresh empyema a maximum of 50-80 mm. hg. should not be exceeded. No pain should be produced. Medium negative pressure has apparently no influence on the heart action; respiration, however, usually becomes deeper and the capacity of the lung seems to be decidedly greater than under normal atmospheric pressure.

HOFFMANN.

Majewski: Surgical Treatment of Pulmonary Empyema (Leczenie chirurgiczne rozrodmy płuc). *Przegl. chir. ginek.*, 1913, viii, 100.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After a detailed discussion of the methods for preliminary examination of the lungs and thorax, the author recites the clinical histories of six cases. The conclusions are as follows: It is doubtful whether the changes in the costal cartilages in patients with fixed enlarged emphysematous chest are primary. It is more likely that they are secondary, presenile, and dependent on changes in the lungs themselves.

The indications for Freund's operation must be made to include suitable cases of primary emphysema. The operation must include the 2d to the 5th ribs and be bilateral, being done by the two-step method, as otherwise a relapse may occur, and a unilateral extra-pleural emphysema with pressure symptoms take place. The operation is to simulate the building of a false joint; therefore 2 to 4 cm. of the cartilage must be removed and the muscle flaps transplanted between the ends. In most cases, the results are satisfactory. Besides the gratifying subjective improvement, objective improvement can be obtained by respiratory exercises for which the higher altitudes are favorable.

WERTHEIM.

HEART AND VASCULAR SYSTEM

DeVerteuil: Two Cases of Penetrating Wound of the Heart Treated by Operation. *Brit. M. J.*, 1913, i, 764.

By Surg., Gynec. & Obst.

The author reports two cases of penetrating wound of the heart observed and operated on by him within three months. The first case was a negro boy, aged 14, who was accidentally stabbed with an ice-pick. He was operated on within three hours after the accident. A penetrating wound of the left ventricle was found. The wound was closed with five interrupted silk sutures after the first stitches introduced had cut loose, due to being tied

too tightly. He had a somewhat stormy convalescence in which, on the eleventh day, after a hearty meal, he evidently had emboli in the right radial and renal arteries, noted clinically by the absence of the pulse and numbness of the right hand. The urine was markedly albuminous but no red corpuscles were present. Recovery was practically complete.

The second case was a colored boy, aged 15. He was operated on five days after injury. The muscle of the heart was so flabby that it was impossible to draw the heart far enough out of the chest cavity to locate the wound. The patient died before the operation was completed. At post-mortem, a punctured horizontal valvular wound of the right ventricle one half inch long and about half-way between the apex and the base of the heart was found penetrating into the ventricular cavity.

The author concludes as follows:

1. A great many cases of penetrating wounds of the heart might easily escape recognition if too much reliance is placed on the failure of the probe to enter the thoracic cavity; but when it is borne in mind that a stab wound in that position usually has to traverse several layers of muscles, the fibers of which run in various directions, it can easily be conceived how difficult it would be to detect the opening into the chest by means of a probe. All such wounds which give rise to symptoms of shock and collapse (even in the absence of other signs) should be immediately enlarged and the thoracic walls sufficiently exposed for a thorough examination. A wound of entry, if found, would necessitate an immediate operation.

2. In one hundred and twenty-four cases of suture of the heart after injury, the proportion of recoveries is 40 per cent; there seems little doubt that the proper treatment for all such cases rests with the surgeon and not with the physician.

3. Iodized or chromic catgut may be used with safety, but the author prefers thin silk applied not too tightly.

4. Complete exposure of the pericardium and heart can easily be obtained by removing the fourth and fifth costal cartilages, thus leaving the sixth rib in position as a support to the heart when the patient is in the erect position.

5. There are two distinct advantages in opening the pleural cavity: first, owing to the collapse of the lung in the upper part of the thorax, the pericardium and heart are more completely exposed, and the operation thereby much facilitated; secondly, it permits of a thorough examination and cleansing of the pleural cavity from all blood clots, which one can never exclude with certainty, the pleura being in most cases wounded at the same time as the pericardium.

6. In addition to the usual treatment for hæmorrhage, an ice bag kept over the heart continuously and hypodermics of morphine are extremely useful adjuncts for allaying the distress and pain. Complete rest in bed for at least three weeks after the injury must be enforced for fear of embolism.

7. The ordinary straight forward incision gives

ample room, which can be further increased if necessary by making transverse incisions at right angles to it.

M. S. HENDERSON.

PHARYNX AND ŒSOPHAGUS

Morison: Congenital Stricture of Lower End of the Œsophagus; Case Treated by Gastrostomy, Followed by Dilatation of the Stricture Through the Œsophagoscope. *Lancet*, Lond., 1913, clxxxiv, 1021. By Surg., Gynec. & Obst.

The article describes the case of a boy, aged 3 years, first seen in August, 1911. Since he was three months old there had been difficulty in swallowing. During the last three months he had become much worse, "vomiting" almost immediately after everything he took. His weight was 20 lbs. An X-ray photograph (with bismuth porridge) showed a stricture of the œsophagus at the upper border of the tenth dorsal vertebra. On September 2nd gastrostomy was done by Morison; the stomach was not atrophied and a No. 10 English catheter was inserted through the pylorus into the duodenum; on October 7th an ineffectual attempt was made to pass a ureter catheter through the stricture from below by means of a cystoscope through the gastrostomy opening. Attempts at bougie treatment under an anæsthetic and the swallowing of thread from above failed. The child steadily and rapidly improved, and on October 31, 1911, returned home weighing 29 pounds. In November, 1912, he was readmitted for further treatment of the stricture. The gastrostomy opening was still his sole resource for feeding, as he "vomited" everything he took by the mouth as before. On November 14, 1912, under chloroform anæsthesia the œsophagoscope was passed, and a stricture was seen at a distance of 26 cm. from the incisor teeth. A fine, stiff, whale-bone bougie of the calibre of a ureter catheter was passed down through the œsophagoscope into the depression, and after a little coaxing it entered the stomach. After this, in the same way, a No. 6 graduated gum-elastic bougie was passed into the stomach and then a No. 8 and it was left in situ for four hours. From this date the child swallowed liquids well, only "vomiting" occasionally.

On January 7, 1913, the œsophagoscope was again introduced and the strictured portion appeared to be large enough to admit the tip of a little finger. The report of January 10th stated that he was then able to eat solid food and never "vomited." He had had nothing by the gastrostomy wound for a month. During March the child continued to improve, and the mother was able to pass a No. 12 bougie without trouble.

DONALD C. BALFOUR.

Bassler: Early Diagnosis of Cancer of the Œsophagus; A New Technique of X-Ray Examination. *J. Am. M. Ass.*, 1913, lx, 1283.

By Surg., Gynec. & Obst.

The principle of this method is to plug the lower end of the œsophagus so that a bismuth mixture is

retained long enough for a picture to be taken. Bassler's apparatus is as follows: To one end of a four foot length of 4 mm. rubber tubing is attached a rubber bag covered with silk and having a brass tip at its lower end to give it weight. At the upper end of the tube is a cock. A surgical syringe of 2 oz. capacity containing water is used to distend this bag, which is then fusiform in shape and about 10 cm. in circumference. The tube is passed like a stomach tube until the bag is just within the stomach, when it is filled with water by means of the syringe, the cock is closed, and the tube pulled up so that the bag is tightly drawn into the cardiac orifice of the stomach. The patient then exhales completely, raising the dome of the diaphragm to a high level, and the tube is held tightly at this point and fastened about the forehead or around the neck of the patient. A weight of from one-half to one pound may be employed to hold the bag tightly against the cardia. A string inside the tube guards against its breaking but still permits the first 40 cm. to stretch 2 inches to allow for the excursion of the diaphragm. Then a mixture of bismuth, acacia and water is run into the gullet through a catheter until the mixture appears in the mouth.

With the patient standing, radiographs are then taken in the lateral dorsal position, with the left side of the back to the plate. After the plates are taken the tube is released and the bismuth flows into the stomach. The cock is then opened, and the water flows out of the bag. Plates of the stomach may then be made. When stenosis is present it is not practicable and unnecessary for diagnosis.

W. H. BUHLIG.

Von Fink: Plastic Repair of the Oesophagus
(Über plastischen Ersatz der Speiseröhre). *Zentralbl. f. Chir.*, 1913, xl, 545.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author used the body of the stomach, the pylorus, and the horizontal segment of the duodenum to replace the oesophagus of a female patient, forty-seven years old, suffering from carcinoma of the gullet. The procedure was as follows: A median incision was made from the umbilicus to the xyphoid cartilage. The stomach was liberated on its greater and lesser curvature by sectional ligation of the lesser and gastro-colic omentum from the edge of the carcinoma to the vertical part of the duodenum. The duodenum was severed at the junction of the horizontal with the vertical branch; the latter was closed. The ninth rib was resected between the parasternal and mammary line and the parietal peritoneum was opened. The stomach was then brought through this opening and drawn up anterior to the thoracic wall, subcutaneously. The cardiac end of the stomach was fixed to peritoneum at the resection aperture. A posterior gastro-enterostomy was then performed. A thoracic skin tube was made and sutured to the free opening in the duodenum.

In the second stage of the operation, the oesophagus is resected in the lower portion of the neck and the upper end fastened to the upper end of the ante-thoracic skin tube. This latter part of the operation could not be carried out, as the patient died of perforation of the carcinoma. The author believes that his method can be carried out easily and offers great advantages.

JURASZ.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Grant: Ligneous Phlegmon of the Abdominal Wall. *J. Am. M. Ass.*, 1913, lx, 1039.

By Surg., Gynec. & Obst.

Grant says it is probable that this disease has been observed under some name or form more frequently than has been reported. It is not known that ligneous phlegmon, though observed most frequently in the neck, may occur in any part of the body. During the last five years substantial additions have been made to the literature of the subject in case reports and contributions.

The only pathognomonic sign is extreme hardness, diffuse or nodular; the skin is not early involved; pain, tenderness, and fever are usually slight. The diagnosis is extremely difficult even when such a condition is suspected. The greatest difficulty is differentiation from malignancy. Leukocytosis favors phlegmon. Slow absorption or suppuration may take place. Histologically, inflammatory new growth with polynuclears and plasma cells is seen. Bacteriologically, small Gram negative cocci

(staphylococci) are found, though Duse says many varieties of bacteria have been reported; Klebs-Loeffler, pseudodiphtheria, streptococci, bacillus proteus, staphylococci, white and yellow — all of attenuated virulence.

Grant reports two cases, both of the abdominal wall. He concludes that the disease occurs generally after middle life with impaired resistance. The immediate exciting cause is a slow infective process with or without trauma. It is a slow degenerative inflammation affecting connective tissue, fascia and muscles, and finally the skin. The usually slow development, interrupted and protracted course, and final resolution, are characteristic. The duration is indefinite, but is usually from several months to two or more years.

L. G. DWAN.

Hoevel: Operative Treatment of Tuberculosis of the Peritoneum (Operative Behandlung der Bauchfelltuberkulose). *Zentralbl. f. Chir.*, 1913, xl, 466.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports forty-one cases of tuberculosis of the peritoneum which were treated surgically

during the years 1896–1912, at the Mareinkrankenhaus of Hamburg. In each case simple laparotomy was performed, using an incision from umbilicus to symphysis, and draining off ascites if present. No further procedure was carried out in the abdominal cavity. In almost every case the wound was promptly closed, in one with silver wire. Sixteen of thirty-three cases operated before 1910 have died; of the remaining seventeen cases (which makes fifty per cent permanent cures), twelve were re-examined and had remained cured. In this series of thirty-three cases, twenty-three had ascites and ten none. The author believes that the combination of peritoneal tuberculosis and ulcerative tuberculosis of the intestine offers an especially poor prognosis when treated surgically. **BRANDES.**

Bagozzi: Subphrenic Abscess (*Empeima subfrenico*). *Clin. chir.*, 1913, xxi, 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This comprehensive monograph gives a historical review with about 250 references. Portrayal of the anatomy of importance in the spread of inflammatory processes from the abdomen to the pleural space are the large openings, further slits in the muscle fibres, in which the pleura and peritoneum approach each other as far as the subserosa; perforating lymph vessels (Küttner, Sapey), finally the bursa pleuralis retrocardiaca (Broman, Favors) which develops in the embryo from the bursa omentalis and may be preserved as a small outpouching ventrally and to the right of the oesophagus. Exact topography of the organs and recesses bordering on the diaphragm. After consideration of the pathologic significance, the following division is made: (A) *cavum superius dextrum* between the right lobe of the liver and the diaphragm; 36 per cent of the abscesses come from the liver, bile tracts, and appendix. The falciform ligament separates this space from (B) *cavum superius sinistrum*. This falls into two parts: 1. *Cavum medium*, corresponding to the left lobe of the liver and the stomach. Twenty-six per cent perforations of the stomach and liver. 2. *Cavum laterale*, bounded by the stomach, colon, and spleen, 8 per cent. (C) *Cavum inferius subhepaticum*: bile tracts 5 per cent. (D) *Cavum posterius retrogastricum*: Pancreas 4 per cent.

Outside of these intraperitoneal suppurations (exception D), we find retroperitoneal abscesses, 24 per cent. They force their way through the cellular tissue between peritoneum and diaphragm, especially at the parietocolic angle. Appendicitis, colitis. Perinephritis more frequently on the right. Course: resorption rarely. Involvement of the pleura frequently: (a) as regional "sympathetic" inflammatory processes in 50 per cent, then as an extension of the suppuration or perforation in 25 per cent, more often in the retroperitoneal forms. Then there results a free pleural empyema, an epiphrenic abscess. Lung abscess, perforation into a bronchus, 16 per cent. On the left, correspondingly, pericarditis, mediastinitis.

Detailed description of the clinical symptoms: Of importance in the Röntgen-ray examination are: disappearance of the recessus costodiaphragmatici, immobility of the diaphragm, high-standing diaphragm, often above the dark shadow a spherical shadow of unequal density, corresponding to a superimposed air bubble, bounded above by the diaphragm and movable with change of position.

Consideration of the individual forms of the disease with fourteen personal case histories. Four operative routes are considered: 1. Laparotomy with an epigastric abscess. Suture of a gastro-intestinal perforation not to be recommended. 2. Rib resection without injury to the pleura (Lannelongue, Auvray, Marwedel, etc.). 3. Transpleural route. 4. Lumbar incision. The author's material comprises three gastric, two duodenal, three hepato-biliary, six appendicular abscesses. Nine cases were curved; spontaneous perforation into the bladder and bronchus, each one; five after transpleural operation, laparotomy, lumbar incision, each one. **HOTZ.**

Ehler: Herniology of Inguinal Hernia (*Prispevky ku herniologii kyly triselné*). *Čas. česk. lékař.*, Prague, 1913, lii, No. 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author gives the results of operations for inguinal hernia gathered in the last eight years. In spite of the most searching observations of anatomical characteristics which were made for the recognition of congenital hernial sacs, the question of a differentiation between a congenital and an acquired sac is not always possible. In addition to the points given by various authors in the literature there is one which was not pointed out before, namely that the congenital hernial sac arises on a level with the tunica vaginalis propria as an original continuation of it, while in the acquired hernial sac it may lie on the opposite side.

In a few of his own observations he could determine this symptom in young narrow sacs with certainty. He discusses the various forms of diverticulæ and recesses of the hernial sac, which he classifies into five groups, namely: simple dilatation, flat recesses in the hernial sac wall, pouches alongside the hernial sac cavity, divided, and finally double sacs. In his second article he takes up chronically inflamed swellings of the abdominal wall, following operations for hernia. Cases are cited. In a man 46 years old, two years after a radical operation for a right-sided crural omental hernia which could not be reduced and a left-sided inguinal hernia, there was observed cloudy urine and difficulty at stool. There developed at the insertion of the right rectus muscle on the symphysis a tumor the size of an egg, hard and nodular, which seemed to grow from the bladder. The scars of the operation for the hernia showed no changes. The diagnosis lay between a carcinoma of the bladder or a connective tissue tumor in its vicinity, or possibly an inflammatory swelling. At the operation which

was undertaken it was seen, after opening the peritoneum, that the tumor was made up of the omentum and the posterior surface of the crural hernial scar. It extended into the bladder as a tumor with concentric tags and consisted of a chronically inflamed connective tissue new formation. It arose at the site of an infected silk ligature. There was also a fistulous tract toward the bladder. The inability of suturing the peritoneum because of the resection of about a fourth of the bladder necessitated a plastic operation with the omentum. The pressure of the tumor against the bladder and the opening of the fistula into the same explained the symptoms of the bladder. The severe pains and difficulty in defecation were probably due to the extensive adhesions of the omentum in the vicinity of the flexure. The second case was remarkable because of the size of the tumor formation. In a man 42 years old, who shortly before his admission into the clinic at Prague had been operated on for left-sided inguinal hernia, there developed, at the site of a fistula which was still present, a tumor in the abdominal wall the size of a loaf of bread 23 cm. in diameter which seemed to extend into the abdominal cavity. It was of a hard consistency with nodular border. There was an occasional rise of temperature. Finally the tumor ruptured and with the contents there came out several silk ligatures, which had been inserted during the operation. The tumor disappeared gradually.

Two other cases of inflammatory tumors following formation of fistulae after radical operation are cited. The author advises a radical operation in this type of tumor; either extirpation or extensive incisions. Although a positive differential diagnosis of the chronically inflamed new formation cannot be made from fibro-sarcoma, it still presents a definite type. If it appears after hernia operations in the scar or its vicinity as an almost symptomless, growing tumor which does not seem to affect the neighboring organs, the conclusion of an inflammatory tumor resulting from an infected ligature can be drawn.

In the third paper he deals with traumatic inguinal hernia. The author describes three cases of inguinal hernia with congenital hernial sac which were made manifest through trauma.

From these observations it can be seen that a traumatic hernia can result from a single trauma through an accident. In judging the manner of production of the traumatic hernia the question is, is it possible for the peritoneum in the vicinity of the internal ring to become so loosened through an injury or through the force of a single action of the abdominal pressure that a sac can be formed in the inguinal canal? The older authors regard it as a physiological impossibility because of the anatomical connection of the peritoneum. Ehler, however, considers it proven by finding definite hernial sacs up to 2 cm. in length, in operations on herniae resulting from a single direct or indirect trauma. They present tears of the vessels and extravasation of

blood under the serosa which plainly show that the peritoneum was loosened from its fixation.

In the majority of cases of traumatic hernia we must take for granted a definite predisposition; either a preformed hernial sac, or a patent vaginal process, through which a possibility of the bulging of the peritoneum is supported.

The diagnosis of a traumatic hernia cannot be definitely made without operation.

In the last article he deals with myoplasty in radical operations for inguinal hernia and gives a new method of operation. The radical operation for inguinal hernia by Bassini must be regarded as one of the first and simplest myoplastic operations, because it forms a double closure of the posterior wall of the inguinal canal out of the musculature of the abdominal wall. In large inguinal herniae the method of Bassini fails because it is impossible to suture the abdominal opening sufficiently. The choice of the muscle layer in myoplasty of inguinal hernia is seen to be very important when one remembers how the inguinal region comports itself after the muscle layer, which has been fastened, begins to contract.

Bearing in mind that the inguinal and crural openings are superimposed one on the other and are separated only by Poupart's ligament we must take it for granted that the contraction upward and inward of a muscle which has been attached to this ligament will necessarily produce a widening of the crural opening, and thereby lead to the formation of the crural hernia. This observation Polya actually made after using the rectus muscle. The best method is the use of the internal oblique and the transversalis as the author has described. The muscle wall is bluntly separated in the course of its fibres. The muscle flap is turned downward and inward and is stretched and fastened to the pubic tubercle and sewed to Poupart's ligament. The external aponeurosis is fastened over the flap as a fascia. The object of a radical operation is arrived at because the closure of the opening is made with the living muscle which can contract and at the time of the stretching can make the opening smaller. It is, in fact, the ideal closure. PIETRZIKOWSKI.

Judd: A Single Transverse Incision for Use in Double Inguinal Herniotomies. *Old Dominion J.*, 1913, xvi, 153. By Surg., Gynec. & Obst.

The object in presenting this paper is to call attention to the use of the transverse incision instead of two oblique incisions in cases of double inguinal hernia.

The incision is made from 8 to 12 cm. in length, or longer in fleshy patients, from a point midway between the internal and external abdominal rings of one side to a similar point on the opposite side, thus connecting the two inguinal canals. The incision passes directly through the subcutaneous fat and exposes the aponeurosis of the external oblique muscle. The fat around each external ring is dissected away for a short distance and

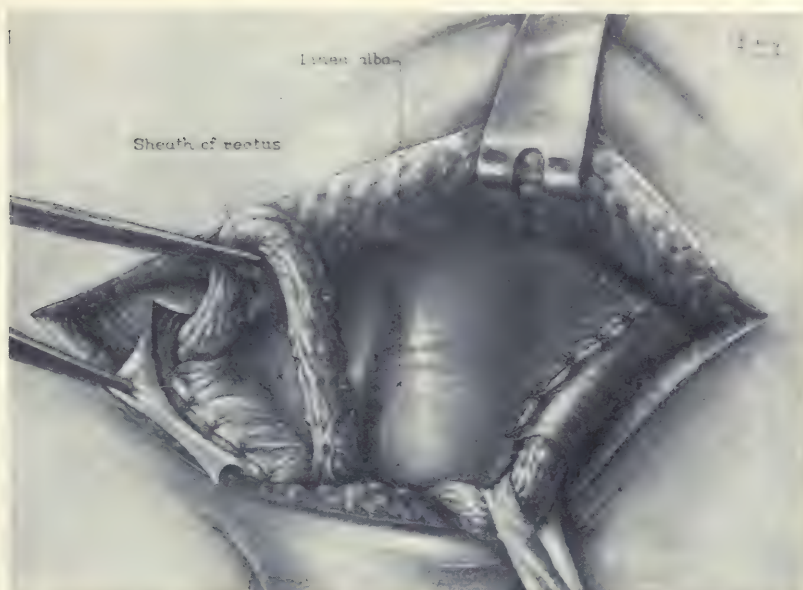


Fig. 1. (Judd.) Skin and superficial tissue reflected exposing the fascia of the external oblique and showing external rings and cords. The incision through the external oblique fascia is made one-half inch to the inner side of the inguinal canal in order to make a flap for overlapping.

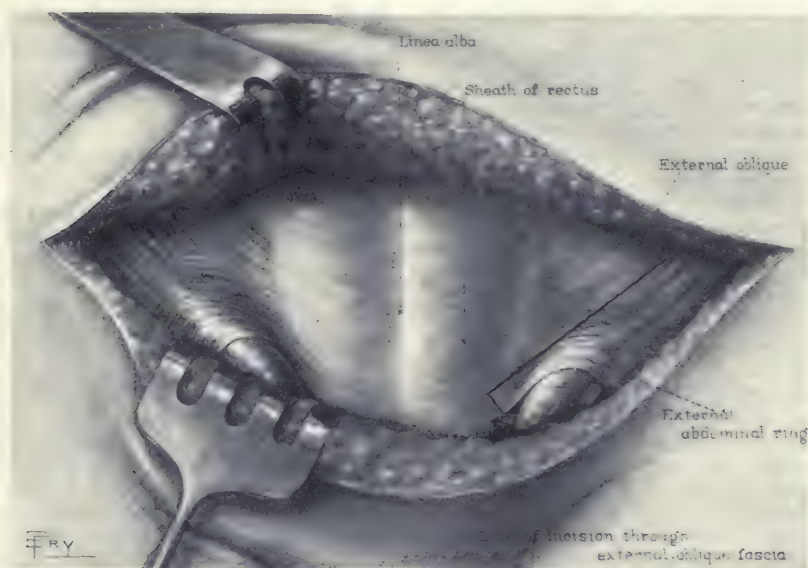


Fig. 2. (Judd.) Fascia of external oblique has been reflected; cord and sac are lifted up preparatory to dissecting the sac from the cord.

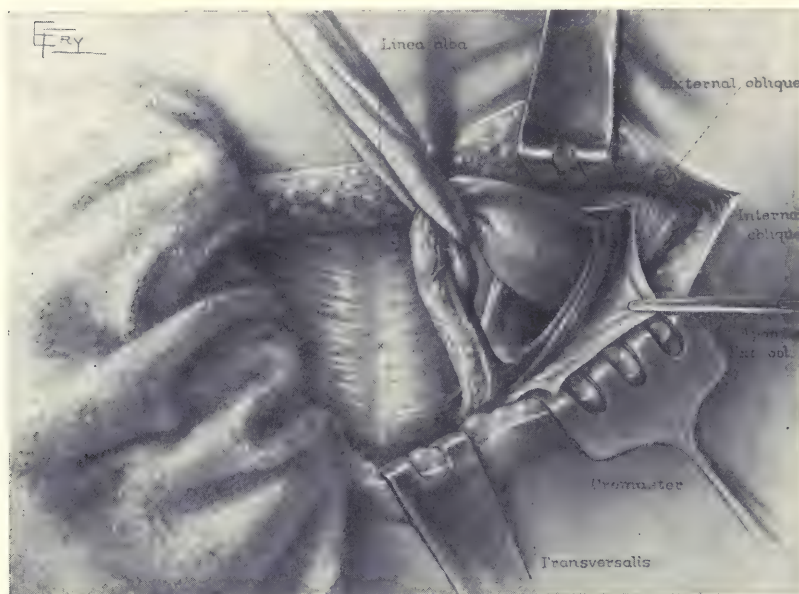


Fig. 3. (Judd.) Operation complete on one side. Aponeurosis of the external oblique, on inner sides of the incisions, is included in the stitches through the rectus, conjoined tendon and internal oblique, and is pulled down to Poupart's ligament. Flap of fascia carried over cord lies between the two layers of external oblique fascia.

then, by properly retracting the skin and subcutaneous tissues of either end of the incision, the entire inguinal canal of that side will be exposed. The hernia on this side is repaired and then the same retraction is made on the opposite side for the repair of the second hernia. After the operation on the herniæ has been completed the superficial tissues are loosely sutured with catgut and the skin closed either by a subcutaneous catgut suture or a through-and-through horsehair stitch. With this incision the exposure of either inguinal canal is fully as satisfactory as that obtained when an oblique incision is made directly over the inguinal canal on each side. The entire length of the transverse incision is often not more than that of the oblique incision, as it is ordinarily made for the repair of a single inguinal hernia. The bleeding is very slight; as a rule, only the small branches of the superficial epigastric vessels come into consideration. One of the principal advantages of this method is seen in those patients who have worn a truss which has compressed and hardened the region or possibly has blistered and broken the skin. The injured areas, in such cases, are low and beneath the inguinal canals and are not encountered when the transverse incision is used. The location of inguinal herniæ is such as to make it difficult to prepare them for operation and it sometimes happens, after operations, that the lower end of the incision, either through infection or through an accumulation of serum at this point, does not heal well. This com-

plication is more frequently seen when two oblique incisions have been used for the repair of double herniæ and is probably due to a greater interference to the circulation and to more extensive traumatism of the tissues in the double herniæ. The transverse incision heals well and entirely obviates this possibility. This method may be applied to any case where it is desired to expose both cords or testicles. It will be found very useful in cases of double hydrocele and, as has been described by Peterson, is a useful incision in the Alexander operation for shortening the round ligaments.

Barker: The Treatment of Large Herniæ. *Lancet*, Lond., 1913, clxxxiv, 1011. By Surg., Gynec. & Obst.

The author says it is not the actual size of the tumor that is the obstacle, but it is the fact that these voluminous herniæ are not going to be taken away, but have to be returned into the cavity of the abdomen. If a very large hernia containing much omentum and other fat be returned into the peritoneum the pressure within is considerably increased, and sometimes with very injurious effects. Perhaps the worst of these is interference with the movements of the diaphragm. A patient affected by the conditions just alluded to should be put to bed for some weeks on a strict regimen to reduce the amount of fat and fluids in the tissues, and daily attempts should be made to return and retain the hernia within the abdomen. If the mass can be reduced and cause no embarrassment to respiration, one

element of danger is eliminated. The restricted diet, and, before all, the denial of fluids, may be reinforced by purgatives regularly to unload the bowels and further reduce the volume of the abdominal contents. Acute bronchitis, marked albuminuria, or much sugar in the urine contra-indicates immediate operation, except in cases of urgency. The author does not believe, apart from the conditions referred to, that age, unless it be very advanced, affects the question of operation necessarily. The possibility of extensive adhesions in large herniæ has also to be carefully considered. When the omentum is adherent to the sac, the latter is removed with all the adherent omentum. This saves much time and bleeding.

The preparation of the patient has the most important bearing on the operative measures which can be adopted for these large herniæ. If the protrusion can be reduced into the abdomen, every effort should be made to retain it there in order that all the viscera shall become accustomed to its presence once more, and especially the diaphragm. He advises that large herniæ about the groin require daily washing with the hottest water that can be borne and often astringent antiseptic lotions for a long time. Finally the night and day before operation there is no better antiseptic application than a 2½ per cent solution of iodine in ethylene dichloride painted freely over the field of operation. For anæsthesia he seems to prefer spinal analgesia. He considers Bassini's operation carried out with every attention to detail the best method when done with care. A large sac need not be dissected formally out of the scrotum. If there is a tendency to ooze, a drain should be introduced for twenty-four hours, as a hæmatoma in this region may be troublesome. The use of silver filigrees is unnecessary in the large majority of cases.

DONALD C. BALFOUR.

Stutzer: The Function of the Great Omentum

(Zur Frage der Funktion des grossen Netzes). *Med. Rundschau*, St. Petersburg., 1913, lxxix, 70.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In accordance with Oppel's opinion that the omentum should be resected as a matter of principle because it is a refuge and breeding place for bacteria, and Heusner's opinion that it is, like the appendix, a rudimentary organ, Stutzer cites Ranvier's opinion that it is to be compared to a large lymph gland. The investigations of other authors show: (1) that animals without an omentum succumbed to peritoneal infections which were borne without difficulty by other animals with omenta (Roger); (2) that the intraperitoneal lethal source of infection is many times larger than the intracranial (Aucher and Chavennaz). Milian emphasizes the plastic as well as the phagocytic properties of the omentum. Bromann calls the omentum a bacteria catcher. Heger and Gilbert showed radiographically the resorption of bismuth through the omentum. Koch obtained the same results by injecting India ink.

The author repeated these experiments by inject-

ing into the peritoneal cavity of laboratory animals suspensions of colon and anthrax bacilli in India ink and after a definite time noting the findings in the omentum. The collective experiments show that foreign bodies are taken up first by the microphages and then by the epithelial cells of the omentum and by the macrophages which take up the microphages. After a short time the foreign bodies are found in the lymph glands and nodes of the omentum, and on intense irritation, as by pus bacilli, the omentum encloses the focus with a plastic exudate. Laboratory animals without omenta react to the same stimuli with a hæmorrhagic exudate and a fibrous deposit. In these experiments deposits were, moreover, observed in the mediastinal glands. According to Stutzer, the mediastinal glands, the lateral ligaments of the uterus, and the peritoneum are respectively the next most important factors in protecting the animal against peritoneal infection. The omentum is first.

VON REYHER.

Stanton: Diverticulitis. *Boston M. & S. J.*, 1913, clxviii, 343. By Surg., Gynec. & Obst.

Meckel's is a true congenital diverticulum, embracing all the coats of the intestine, and is due to the persistence of the omphalo-mesenteric duct. The autopsy records of Johns Hopkins Hospital show one case of this in every seventy-two. It is usually attached to the ileum, near the cæcum, and consequently in its symptoms it resembles appendicitis. Its most alarming complications are obstruction, or strangulation due to adhesions of the diverticulum to bowel or abdominal wall. The author's case was a child of six, always sickly and poorly developed; vomiting was frequent, and constipation the rule. New growth, tuberculous peritonitis, malnutrition, and chronic duodenal indigestion were some of the diagnoses made by excellent men. The abdomen was distended, and flat to percussion; a fluid wave was present. Peristalsis was visible in the upper abdomen. Tenderness was lacking. At operation was found an enormously distended stomach, duodenum, and jejunum — all with hypertrophied walls. The cause was an adherent Meckel's which was freed and removed.

Acquired diverticula are really hernia of the mucous membrane through the muscular coat and are usually found along the mesenteric border of the large intestine, mostly in the sigmoid and very rarely in the rectum. Their cause is obscure. Fleishy males during or just past middle life are the usual victims. Frequently there is accompanying inflammation with a mass often thought to be malignant, in which a hardened collection of feces is frequently found. It is important to have every sigmoid growth carefully examined before labeling it cancerous.

The symptoms are left-sided appendicitis with severe general pain localizing later on the left. Vomiting is uncommon but tenderness and rise of temperature soon appear and a mass develops in the

left lower quadrant. Stone in the kidney and pus infection must be eliminated. The treatment is surgical except in old people or when the attack is slight. Stanton's four cases were men of thirty, forty-eight, sixty-three, and sixty-five, respectively. The first had a tender mass on the left and was relieved by operation. The man of sixty-five had a left-sided mass with obstruction, which proved to be a cancer secondary to diverticulitis; this was removed but the patient died of pneumonia in the third week. The man of forty-eight also had a tender movable mass on the left which finally disappeared; he refused operation. The man of sixty-three had for years attacks of left-sided pain occasionally accompanied by vomiting; at about the end of the second day of each attack a tender mass, which disappears within a few days, can usually be found in the sigmoid. In view of his age and excessive weight operation was not advisable.

Nicholson: The Urachus as a Factor in Intestinal Obstruction; with Report of a Case. *Lancet-Clinic*, 1913, cix, 285. By Surg., Gynec. & Obst.

The author reports the case of a man 34 years of age who entered the hospital with a pulse of 140, temperature 97°, respiration 36, greatly distended abdomen, and complaining of most intense pain about the region of the umbilicus.

An incision just to the right of the median line, extending from a point one inch above to four inches below the umbilicus, disclosed a loop of ileum rotated upon itself, which was suspended by a cord extending from the umbilicus to the summit of the bladder. After the much discolored bowel had been released, the cord was ligated at its attachments and removed. Patient made an uneventful recovery.

In a discussion of the origin of the cord causing the obstruction, it was shown from the studies of embryos and fetuses from six weeks to four months of age by Cuneo and Veau that the allantoic neck, first included in the ventral wall of the embryo, becomes disengaged therefrom and protrudes into the abdominal cavity, being attached to the anterior wall of the abdomen only by a thin membrane. As the result of an arrest of development in the transitory existence of the primitive peritoneum, attaching the urachus to the parietal wall, the membrane may become attenuated and finally disappear, leaving the urachus attached at the extremities, which would explain the origin of the obstruction.

GASTRO-INTESTINAL TRACT

Guillot: A Picture of a Diverticulum of the Stomach, without Corresponding Loss of Any Portion of the Stomach Wall (Image diverticulaire de l'estomac ne correspondant pas à une perte de substance de la paroi gastrique). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxiv, 222. By Journal de Chirurgie.

In a man, 65 years old, who for thirty years had had slight stomach trouble and had recently had

severe pain and trouble with swallowing, radioscopic examination showed: 1. An œsophageal pouch characteristic of a carcinoma of the cardia. 2. A diverticulum of the lesser curvature indicating that this region was involved by the neoplasm. 3. A large diverticulum of the greater curvature.

But, as a laparotomy to perform a gastrostomy showed, this large diverticulum of the greater curvature did not correspond to an ulcer, a scar, or to a new growth. This apparent diverticulum then was due entirely to an abnormal and passing contracture. It should be stated that the diverticulum of the lesser curvature remained fixed, whereas the one in the greater curvature seemed during the radioscopic examination to be affected by the movements of the stomach.

This observation shows that radioscopic examination brings to light many points that would be missed by simple radiography.

DELBET cited a case in which the radioscope was deceiving. In a case which he and Enriquez had diagnosed as duodenal ulcer, radioscopy made by Enriquez showed a deep, wide indentation of the greater curvature extending toward the lesser, and it remained during the whole examination despite the movements of the stomach, which made the presence of a large carcinoma of the stomach seem likely. At operation no change in the stomach was found. Delbet performed a gastro-enterostomy and an uneventful recovery followed.

RICARD, discussing the case of Guillot, reported a case in which there was a perfect picture of an hour-glass stomach, the stomach being completely divided into two parts connected by a narrow canal. This radiograph led to the making of a series of radioscopy during the next few years in all of which exactly the same state of affairs was found. Its constant occurrence during three years made it seem to be a fixed lesion. However, at operation it was found to be a contracture of the middle of the stomach at the sight of an old, small, healed ulcer situated in the lesser curvature, which did not persist under the relaxation of an anæsthetic.

While recognizing the immense value of radioscopy and admitting its superiority to a single radiograph it must be granted that pictures of the stomach containing a bolus of bismuth must be subject to minute and repeated control and should not be accepted except when interpreted by skilled observers.

J. DUMONT.

Sasse: Callous Ulcer Involving the Entire Stomach; Excision; with Comments on Complete Loss of the Stomach and the Technique of Stomach Resection (Ulcus callosum ventriculi totale; Extirpation, nebst Bemerkungen über den dauernden Verlust des Magens sowie über die Technik der Magenresektion). *München. med. Wchnschr.*, 1913, lx, 650.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Demonstration of an extreme case of contracted stomach resected in toto. The entire stomach was involved in a callous ulcer. The Röntgen picture

had shown it as a narrow shadow, of about a finger's breadth, slightly arched and extending from the œsophagus to the region of the pylorus. It had been diagnosed clinically as malignant stenosis of the pylorus. The stomach wall was 1-2 cm. thick, the submucosa being chiefly affected. Carcinoma could not be demonstrated. There had never been any bloody vomiting and blood could not be demonstrated chemically in the stomach contents. The patient bore the operation well and a year and a half later had gained 52 pounds in weight, from which fact Sasse concludes that the complete loss of the stomach has no bad effect on the state of nutrition. The technique of this operation was as follows: After freeing the greater and lesser curvatures, the stomach was cut off at the pyloric end. Traction was made on the stomach to pull down the cardiac end and the œsophagus. Then an incision was made in the mesocolon, the upper coil of the jejunum drawn through it and sutured to the posterior surface of the cardiac end of the stomach. Finally the stomach was severed at the cardiac end and anastomosis completed in the usual way. Sasse recommends this as an exceptionally good technique for this operation.

KNOKE.

Kolb: The Permanent Results Obtained with Ligation of the Pylorus with Omentum and Fascia (Unsere Dauerresultate bei der Umschnürung des Pylorus mittels Netz und Fascie). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

At the Heidelberg Clinic, the author has practiced ligating the pylorus with autoplasmic material (omentum and fascia) in cases of bleeding ulcers of the stomach with duodenal stenosis in place of the unilateral pylorus exclusion method of von Eiselsberg. He treated eighteen cases, three with omentum and fifteen with fascia. The first nine cases date back nine months and are alone considered. All nine cases were re-examined lately. By means of bismuth pictures, it was found that the pylorus was closed in all and that the stomach emptied itself within one hour through the gastro-enterostomy opening. The patients looked well, had gained in weight and felt well. No occult blood could be demonstrated.

The technique of the operation is as follows: The strips of fascia are at least 3 cm. wide, not too thin and free of all fat and muscle. He now uses only the fascia lata. The pylorus should not be tied too tight, just sufficient to occlude the duodenal lumen. Such a strip does not relax if it is sutured to the serosa with fine silk or catgut, as was demonstrated in the re-examined cases. Parlavocchio also advises this. The author fastens one end of the fascia to the serosa by means of sutures and then draws the strip through and fastens the other end, placing a few anchor sutures to prevent it from moving. The fascia is not knotted. The ideal method, however, is the unilateral pylorus exclusion of von Eiselsberg. The disadvantages (more serious and time-consuming)

ing) make a more rapid method desirable in weak and anæmic patients. The author believes, however, that the autoplasmic ligation of the pylorus deserves the preference over the von Eiselsberg method. In those cases in which no fascia is available, the ligation can be carried out with a strip of omentum just as successfully.

Küttner: Duodenal Ulcer (Ulcus duodeni). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the most important points in the pathology and treatment of duodenal ulcer, based on his own experience and that of eighty other surgeons, covering a total of eight hundred cases. The apparent discrepancy between the German and Anglo-American figures is explainable when conditions are considered. In Germany there are a large number of cases in a few hands, while in the Anglo-American countries the operation is performed only in the advanced stages. The predisposing factors of an acute duodenal ulcer are laparotomy, appendicitis, septic infections, etc. According to the author's experience amputations may be added to the list. They in part also predispose to the chronic ulcer. Of the symptomatology the anamnesis is the most important as Moynihan emphasizes. The "hunger pain" is of equal significance with the late pain, or night pain, and with the periodicity. The pains are due to pylorospasm and are not particularly pathognomonic. They can occur in ulcer ventriculi and in carcinoma. More constant is the periodicity as a result of the healing and recurrence. The absence of occult blood in the interval is important. Something has lately been gained in the objective findings. Hyperchlorhydria is not constant and not very frequent. Of more importance is hypersecretion, which may be present even in the empty stomach. Achlorhydria may occur. Motility shows intermittent insufficiencies, and transitory twelve-hour retention (Kämp). Occult blood may be absent, even in the florid state. Spontaneous and pressure pain is localized in the epigastrium, usually to the right of the median line, but more frequently the sensitiveness is diffuse.

Only the ulcers in the anterior wall can be seen during laparotomy, therefore it is necessary to open the duodenum (Wilms). Complications are frequent, so that Simmonds finds a mortality of 70 per cent, due to perforation and hæmorrhage. Ulcus ventriculi is frequently accidentally found. As a boundary line between stomach and duodenum, the vein of Mayo is sufficient for practical purposes. The differentiation of gastric ulcer from duodenal ulcer is important from a prognostic point of view. There is slight tendency to cure; a healed duodenal ulcer is rarely seen. The treatment must be surgical so long as the results of internal therapy are doubtful. Indirect surgical treatment is the more frequent procedure, as resection is highly dangerous and possible only in ulcers of the anterior wall. Of the indirect methods, gastro-enterostomy in absence of

stenosis is insufficient. It is necessary to produce a stenosis. Suturing of the ulcer, after tucking it in, according to Moynihan, is not satisfactory in all cases and is impossible experimentally. Ligation with suture material is also unsatisfactory. The Wilms method of ligation with fascia does not seem certain according to Tappeiner. The ideal method is the division of the pylorus according to Von Eiselsberg, but the operative mortality is increased 10 per cent and it does not prevent post-operative hæmorrhage. It is to be done only in cases where it can be performed very easily. In all cases a systematic after-treatment should be carried out. Perforation demands early interference, as after forty-eight hours it is hopeless. Gastro-enterostomy should be done primarily or secondarily in addition to other necessary procedures. The treatment of hæmorrhage is analogous to that of gastric ulcer; only moderately severe and recurring mild cases are adapted to the operation. Excision is possible only in few cases, as the ulcer usually is on the posterior wall.

Eisen: Duodenal Motility. *Wis. M. J.*, 1913, xi, 316.
By Surg., Gynec. & Obst.

The author discusses the recognition by the fluoroscope of changes in the motility of the stomach previously thought to be normal and due to lesions often far distant. These changes are termed "duodenal motility."

The motor function of the duodenum associated with chemical changes in the stomach contents are dealt with only. The normal stomach activity is twofold—one its own, the other the result of the pyloric reflex. The control of the latter depends upon the degree of acidity in the pyloric antrum; when a certain concentration exists the pylorus opens and the chyme passes into the duodenum and when the acidity in the duodenum reaches a certain degree the pylorus closes. The opening of the pylorus is controlled by the duodenum and this control is possessed to some degree by all derivatives of the midgut, thus accounting for the gastric disturbances in intestinal diseases.

The motility of the stomach was thought to be normal if the stomach was found empty seven hours after a Leube meal, but it is often empty two hours later in duodenal ulcer and in other midgut lesions and a pylorospasm is often demonstrable. In these conditions an examination of the fasting stomach shows an open pylorus. The bismuth meal passes immediately into the duodenum, a small residue remaining in the bulbous duodeni and the rest passing rapidly through into the jejunum. This phenomenon is repeated with the ingestion of more food, due to lack of pyloric control through the duodenum and not dependent upon the degree of acidity. Occasionally a small residue is seen to the left of the pylorus, whose presence is explained by assuming the presence of a pylorospasm. This pylorospasm is considered by some to be due to increased acidity, yet experiments show that the pylorus opens

when a certain degree of acidity exists in the stomach. Furthermore, secretion is controlled by the vagus, while pylorospasm is a myenteric reflex action. It seems to the author plausible that as the duodenum has lost control over the pylorus in lesions of midgut derivatives so the vagus has lost control over the production of acid and pylorospasm occurs as the precedent of hyperacidity.

Fenwick has noted hyperacidity in appendicitis; Graham in appendicitis and gall-bladder trouble; and Moynihan believes gastric ulcer is not primarily a stomach lesion but a chronic infective lesion in some abdominal organ in which more acute infections from time to time arise, causing transient exacerbations in the symptoms. He has found appendicitis in a large number of cases having duodenal ulcer, leading one to believe that appendicitis causes pylorospasm, hypersecretion and hyperchlorhydria.

In affected stomachs the position is often high up or drawn to the right. The shape is chiefly determined by the anatomical relations of the muscular fibres, their activity resulting in a state of tonic contraction—hypertony. Dependent upon this hypertony is the excessive peristalsis so characteristic of these cases, involving the whole stomach in hypertonic shaped organs or the antrum alone in those showing atony.

Cannon is quoted as summarizing gastric peristalsis as consisting of serial waves starting at a pulsatile source and resulting from tension produced by internal pressure acting on the tonically shortened gastric musculature. Only when the medium of internal pressure, i.e., the contents, disappears, does peristalsis normally cease. Tonus is first given by vagus impulse and later maintained by the stomach itself. The time for one wave to exceed another is normally 17 to 22 seconds, but in duodenal motility only a few seconds are required. Occasionally, even where no stomach lesion is found, an intermittent hour-glass contraction, a vagus stigma, is met with, and that this may in time lead to true stenosis is the author's belief.

The first four inches of the duodenum must be considered functionally a part of the stomach. The result of the open pylorus is the uninterrupted filling of the duodenum, whose contents move rapidly onward, but showing retention in the bulbous duodeni. Whether this retention is in the bulbous duodeni or the pyloric antrum, or is due to a duodenal spasm, is in doubt, but the occasional air bubble capping it leads the author to think it is in the bulbous, acting as a reservoir to control the differing pressure in this part.

Radioscopy has shown that even in marked duodenal obstruction there is little change in the size of the stomach. In duodenal stenosis one can see lively peristalsis without progression of the duodenal contents, and some retardation of the stomach contents insufficient to cause dilatation or hypertrophy. The duodenum is markedly distended but little if any hypertrophied, the latter only develop-

ing upon a marked and long standing obstruction, which, because of the small quantity and liquid state of the duodenal contents is of slow progress. Antiperistalsis is also seen at times. When stenosis is complete a finger-like projection is seen extending from the pylorus to the point of stenosis.

E. K. ARMSTRONG.

Rowlands: Jejunal and Gastro-jejunal Ulcers.

Guy's Hosp. Gaz., 1913, xxvii, 149.

By Surg., Gynec. & Obst.

A general discussion of the etiology of the conditions under consideration is given together with a description of the treatment and a report of two cases. Jejunal and gastro-jejunal ulcers follow a certain percentage of gastro-enterostomies but it is significant that it has never been recorded as following a gastro-enterostomy which was performed for malignant disease. The apparent immunity which these cachectic patients seem to enjoy is probably due to the diminution or absence of free hydrochloric acid in their gastric juice. It is estimated that this complication occurs in about 1.5% of the cases where gastro-enterostomies are performed for non-malignant disease. The condition is found especially after anterior gastro-enterostomy and, above all, after antero-anastomosis, or the Y type of operation, in both of which the acid gastric juice, unmixed with the bile or pancreatic juice, comes in contact with the mucous membrane of the jejunum.

The uncertain causes of the original ulcer of the stomach or duodenum may play some part in the new ulceration. Some of the most likely are chronic septic absorption from an inflamed appendix or gall-bladder, or the ingestion of infective material from a septic mouth.

The symptoms usually appear after a considerable period of apparent good health following the operation. The first thing complained of is indigestion, with symptoms simulating those of duodenal ulcer, except that the pain, which the patient usually describes as burning, is usually situated to the left of the middle line above the level of the umbilicus. Further, its relation to food-taking is far less striking, although it is usually aggravated by solid food, so that the patient limits his diet mainly to liquids and soft foods. Sometimes the pain is relieved by food but it usually comes on again in an hour or two. Usually there are nausea and loss of appetite, and occasionally vomiting, and even hæmatemesis, with signs of dilatation of the stomach. There is often tenderness and rigidity to the left of the umbilicus and there may be an induration here due to plastic peritonitis, with adhesion to the parietes, and even a cutaneous fistula may form. At any time signs of perforative peritonitis may develop. Sometimes the patient has been perfectly well following his operation and the first sign of trouble is a very acute pain in the abdomen with the rapid development of signs of perforative peritonitis.

The treatment of these ulcers should be medical

until it has been shown that this is of no avail. Medical treatment consists mainly of rest in bed, feeding of bland albuminous and fatty foods, and the neutralizing of the gastric juice with alkalis.

Radical operation is usually undertaken after medical treatment has proven of no avail. Finney's method of enlarging the pylorus may be used to great advantage in some of the cases. It provides free drainage of the stomach, cuts down the acidity of the gastric juice, and allows the patient to eat more.

A more extensive radical procedure consists in the separation of the old anastomosis, the closure of all the openings and the formation of an entirely new and improved gastro-jejunosomy. This is probably the best procedure if the condition of the patient will allow of its execution. All operative procedures, however, should be followed up by careful medical treatment, in order to prevent a recurrence of the condition.

JAMES H. SKILES.

Ladd: Progress in the Diagnosis and Treatment of Intussusception.

Boston M. & S. J., 1913.

clxviii, 542.

By Surg., Gynec. & Obst.

The author states that, now the controversy as to whether intussusception should be treated by inflation and irrigation, or by immediate operation, is over, and timely surgery is considered the best treatment, it is interesting to see whether any reduction in mortality has taken place and whether we have at our disposal any means for still further reducing it. In 1908 Stone reported eight patients operated with one recovery in the Children's Hospital for the previous five years and also eight patients operated in the Infant's Hospital with one recovery in the previous ten years. Codman, in the same year, reported ten patients operated in the Massachusetts General Hospital in the previous ten years, with one operative recovery. This patient later died from a hernia operation. These cases give a mortality of over 90 per cent. In general hospitals the surgeons have an opportunity of operating only one or two cases in ten years and consequently lack uniformity of method. This suggests the advisability of having these cases sent to a hospital devoted to the care of children or having surgeons especially qualified for the work of taking care of them in more general hospitals.

The cases reviewed were operated by Stone and the author. Each had ten cases in the five years since 1908. Six of Stone's cases recovered, while five of the author's lived. In this series there was a mortality of 45 per cent, which is just half of that reported from the three hospitals mentioned above five years ago. This is encouraging and the author believes the results have been made possible by the co-operation of the pediatrician, the general practitioner and the surgeon. With earlier diagnosis and operation, intussusception will be removed from the list of diseases of high mortality.

The following facts from this series of cases are interesting: The average age of Stone's six cases

which recovered was two years, average duration of symptoms in four (duration not mentioned in two) was thirty-nine hours. The average age of the five patients operated by the author was seven months and average duration of symptoms was forty-eight hours. Of the patients that died the duration of the symptoms was nearly the same. No case was lost where the duration of symptoms was less than forty-eight hours, and with one exception no case with symptoms lasting over forty-eight hours was saved. The deduction to be drawn is that we must get cases within forty-eight hours and preferably within thirty-six or twenty-four hours.

The author draws attention to the fact that the description of intussusception given in most textbooks is that of a patient who has been sick for about two days. It is far more useful to the practitioner to remember that infants in the early stages of intussusception, between paroxysms of colicky pain, are apt to look perfectly well and have no elevation of pulse or temperature; and that the mother's story of a baby who has been well and suddenly taken with an attack of abdominal pain, associated with drawing up of the legs and followed by vomiting, is sufficient reason for making a thorough abdominal examination even if the baby looks well. At this period, before any distension has taken place, a small mass of resistance may be felt any place along the course of the colon, but in this early stage is most likely to be felt at the cæcum or between there and the middle of the transverse colon. The next sign which presents itself is blood in the stool. The presence of blood, without much fæces and mucus and the frequent movements characteristic of infectious diarrhoea, is practically pathognomonic of intussusception. Any patient passing blood as described should be taken to the surgeon at once whether a tumor is felt or not. Later the classical symptoms appear, the treatment becomes difficult and the prognosis grave.^f

Lately the author has been using bismuth paste injected into the lower bowel to aid in the early diagnosis of these cases. There are several X-ray plates illustrating the article. The bismuth travels up the colon readily and reaches the intussusception. In these cases the shadow cast is suddenly and sharply cut off at the upper border. It has only been tried in three cases as yet, but the results tend to show that it may be useful in the early diagnosis of doubtful cases.

EDWARD L. CORNELL.

Green, Kellogg and Harvie: Spastic Paralytic Ileus. *Boston M. & S. J.*, 1913, clxviii, 580.
By Surg., Gynec. & Obst.

The article deals with reports of two cases of spastic paralytic ileus following laparotomy. The first followed a bilateral salpingectomy and appendectomy. The cæcum was difficult to deliver into the median incision and considerable traction was made in the ileum near the cæcum during the appendectomy. The patient died 81 hours after operation with symptoms of acute dilatation of the

stomach, the distention beginning in the upper abdomen. Partial autopsy through the incision showed an annular constriction of the ileum 4 inches from the cæcum where the gut was flattened, dull, slightly reddened and contracted. Its walls were in apposition. The gut above and the stomach were enormously distended. The distal four inches of ileum, the cæcum, and the large intestine were flat, with no signs of peritonitis or hæmorrhage.

The second case was a laparotomy for adherent retroversion and salpingitis in a patient who had had a previous laparotomy for old pelvic inflammatory disease. In freeing adhesions along the old incision considerable traction in the gut was necessary. This patient died and partial autopsy through the operative wound revealed a spastic annular contraction $1\frac{1}{2}$ inches long where the gut had been separated along the original incision. No signs of peritonitis were present. The symptoms were the same as in the first case.

The conclusions drawn were: Death was due to intestinal obstruction from a localized tonic contraction of the circular smooth muscle fibres of the small intestine, caused by surgical trauma. From the nature of its pathology, which was probably a mechanical injury to the plexuses of Auerbach and Meissner, the most convenient descriptive term for the condition seemed to be spastic paralytic ileus.

The lesson learned from these cases is the immense importance of avoiding pinching trauma to the bowel during laparotomy. The small intestine seems more liable to the condition than the large, hence in appendectomy traction should never be made on the ileum for the purpose of bringing the cæcum into the wound, but only the large intestine should be employed for such necessary traction.

Harris: Report of a Case of Fecal Impaction in the Ileum for Fifty-three Days with Recovery. *J. Am. M. Ass.*, 1913, lx, 722.

By Surg., Gynec. & Obst.

Harris reports a unique case of intestinal obstruction in a man who at the age of 60 had an obstruction due to carcinoma of the sigmoid, relieved after seven days by cæcostomy. At 62 he had fecal impaction lasting forty-nine days relieved by a ride on a jolting lumber wagon. At 63 a fecal impaction lasting fifty-three days was relieved by lavage of the ileum through the artificial anus. He died of acute obstruction from prolapse of the cæcum through the cæcostomy fistula four years after the establishment of the artificial anus. This patient was seen by Harris in his third attack fifty-three days after his last bowel movement. During the time of fecal impaction the patient passed only gas through the artificial anus and nothing by rectum except a small quantity of blood-stained mucus. During the entire time he worked on the farm and ate three meals a day, his appetite beginning to fail only a day or two before he presented himself for treatment. Harris presents in detail the physical and la-

boratory findings in this case, including X-ray pictures.

Concluding his report he says:

1. Cæcostomy may be complicated by contraction of the opening requiring dilatation from time to time, by fecal impaction necessitating irrigation through the artificial anus, and by prolapse of the cæcum through the cæcostomy fistula.

2. Fecal impaction in the ileum in this case was due principally to ingestion of fruit seeds and imperfectly masticated vegetables, such as string beans, which became impacted at the ileocæcal orifice.

3. Mere fecal accumulation does not cause urgent symptoms as long as the intestinal gases have opportunity to exit. The distention may produce displacement of the liver and stomach without marked interference with their functions.

4. The urine, in this case, became dark red from elimination of bile pigments and hematin reduced to urobilin in the intestine; and the urine contained a few hyaline casts, but no albumin.

5. Treatment to be effective must be persevering and should be conducted with full knowledge of the probable existence of stercoral ulceration in a greatly distended intestine, and of the possibility of separating the bowel from the colostomy opening by any undue violence.

6. Prolapse of the cæcum through the artificial anus may prove fatal unless skilful surgical attention is promptly available. L. G. DWAN.

Patek: A Case of Primary Sarcoma of the Small Intestine (Ein Fall von primärem Sarkoma des Dünndarms). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 414.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Sarcoma of the small intestine is more frequent in men than in women. The percentages quoted are 92.8 per cent (Baltzer), 77.5 per cent (Reinwald). To the eleven cases reported in the literature, Patek adds one of intestinal sarcoma in a woman who was operated upon.

The patient, 49 years old, previously well, took sick three weeks before admission. She had intermittent attacks of severe pain in the right iliac region. Little importance was attached to these attacks even after the abdomen showed enlargement and increased resistance. Fever and vomiting were absent, but there was marked constipation. Pains subsided at times, only to recur in more aggravated form. Quite emaciated on admission, abdomen everywhere soft, with moderate tenderness in right hypochondrium. In umbilical region and a little to the right a hard movable tumor, the size of a fist, irregular, with rough nodular surface; not tender but dull on percussion. Per vaginam, the uterus was small and adnexa free. A tumor was apparently adherent to right appendage by band of adhesions. Diagnosis: ovarian cyst with twisted pedicle, or intestinal tumor.

Median laparotomy revealed a large bluish tumor, covered by omentum, a little to the right and behind the uterus, so that for a moment it gave the impres-

sion of tubal pregnancy. It was difficult to separate the tumor from transverse colon, ileum, and jejunum. Tumor was ruptured and discharged reddish brown fluid, and granular masses; originated from jejunum, wall of which contained a nodule the size of hazel-nut. Mesentery thickened and infiltrated at its intestinal attachment. Enlargement into abdominal cavity occurred from primary nodule in jejunum; size largely dependent on hæmorrhage which had partially organized. Tumor itself was flatulous and friable. Two engorged vessels, the size of a goose-quill, extended from tumor to intestine. The gut was resected 10 cm. on either side of tumor and lateral anastomosis was done. Lymph glands on both sides of spine were large and infiltrated. Perfect union. Microscopic examination: Large spinulated sarcoma with profuse hæmorrhage. Section nearer the bowel resembled fibrosarcoma with connective tissue similar to smooth muscle fibre. Tumor apparently originated from muscularis of the bowel.

Some authors hold that sarcoma of the small intestine does not produce symptoms of stenosis or obstruction and use this to differentiate it from carcinoma. Others contend that in half the cases these symptoms do occur. Increased tenderness is said to be diagnostic of appendicitis. In this particular case there was only slight tenderness, but severe attacks of pain and persistent constipation. When the patient reported seven months after operation there were no signs of relapse. THON.

Hartmann: Vegetative Adenomata of the Superior Portion of the Small Intestine Simulating Pyloric Stenosis (Adénomes végétants de la partie supérieure de l'intestin grêle simulant la sténose pylorique). *Presse méd.*, Par., 1913, xxi, 214.

By Journal de Chirurgie.

Hartmann has had an opportunity to observe and operate upon two cases of polyp of the duodenum. These are of interest because they are very unusual and in each the tumor had produced a gastric stasis which simulated the stenosis caused by ulcer.

Case 1. A woman, 49 years of age, without any preceding gastric symptoms, was seized with epigastric pain, vomiting and diarrhoea. She was treated for ulcer of the stomach but the pains continued, the epigastrium became distended and she experienced a feeling of suffocation with eructations. Examination revealed the presence of considerable residual fluid in the dilated stomach. At operation, on October 1st, 1912, the pylorus was found to be normal and the first part of duodenum dilated. In the second part a soft tumor the size of a turkey egg was found lifting the wall but not altering it. In the first part of the jejunum there was a double invagination, ascending and descending, which was reduced with difficulty. Gastro-enterostomy was performed, the second part of the duodenum was incised longitudinally and within its lumen was found a soft lobulated tumor attached by a pedicle, one inch in diameter, to the postero-internal wall of

the intestine. The mucous membrane was incised around the pedicle which was then cut, three arteries ligated, and the wound sutured with silk. The duodenum was closed and recovery uneventful.

Case 2. This patient was 15 years old. For three years there had been pains in epigastrium beginning two to three hours after eating and continuing for several hours, when they ceased gradually or suddenly after vomiting. The patient became very thin, and the abdomen was distended. Examination revealed besides the above features, gastric splashing and at times peristaltic waves. In several attacks an ovoid mass was felt in the left flank which could be pushed up under the ribs but descended of again immediately. There was considerable gastric stasis. The gastric fluid obtained in the morning contained bile. At operation June 8, 1911, the stomach was found to be dilated, but otherwise normal, and the duodenum dilated. Immediately distal to the duodeno-jejunal junction was a mass of twisted coils of small intestine. On untwisting these, the author found two invaginations of the intestine which were easily freed. Proximal to the site of the higher invagination, a little above the duodenal-jejunal juncture, a tumor was palpable within the intestine. The bowel was incised and a tumor, studded with nipple-like projections, was revealed almost filling the cavity. The wall was cut, the pedicle excised and the opening then sutured. Recovery was uneventful. In October, 1912, the patient ate and digested well without experiencing any discomfort. Microscopic examination of the tumor revealed an adenoma as in case one.

In these cases, besides the symptoms simulating pyloric stenosis, the occurrence of an invagination is worthy of note. The invagination was apparently not caused by the migration of the polyp drawing the intestinal wall after it. The fixity of the intestine at the site of the tumor precludes such an explanation. The cause was rather a perversion of the muscular action comparable to the observations of Peyer and Brunner, who found temporary invaginations in animals as a result of irritation of the intestine.

J. DUMONT.

Murphy: Contraction of Intestinal Anastomotic Opening with Extensive Abdominal Adhesions; Cæcal Fistula. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2. By Surg., Gynec. & Obst.

A man of 40 was admitted on account of continuous abdominal distention and discomfort though not much pain; he also had a cæcal fistula. The history dated back five or six years when the appendix was removed. Nine laparotomies were performed in the previous four years, most of them for relief of adhesions.

At operation the intestines were found matted together and enormously dilated. The anastomosis between the ileum and the descending colon was contracted down to such a small diameter that considerable peristaltic action of the bowel was nec-

essary to force its contents through the opening. The result was hypertrophy of the bowel and distention of the intestines. The large intestine below the anastomosis was not materially distended. The large bowel proximal to anastomosis was not dilated.

The ileum had been divided close to the colon, and the end of the bowel was closed. About 4 inches from the proximal end of the ileum it was anastomosed laterally with the descending colon, just below the splenic flexure. The anastomotic opening had contracted down to almost the size of a lead-pencil. The portion distal to the anastomosis was very much dilated. The catheter through which he irrigated his bowel passed down into the cæcum. When the proximal end of the ileum was swung from the right to the left side the adhesions on the right side that were freed before had become re-established, so there was great tension between the anastomosis and the adhesions of the ileum in the right iliac fossa; further, the mesentery was not approximated to the posterior wall of the abdominal peritoneum to prevent the formation of an open loop. Through this open loop a large portion of the small intestine had passed, and compressed the ileum which passed across the pelvis from the right side of the small intestine to the large intestine to which it was approximated. This spread out as a fan and produced retention by compression as well as retention by stenosis of the opening.

The opening present was enlarged, doing a typical suture operation. The opening in the cæcum was allowed to close.

The operation lasted nearly three hours, but the patient left the table in splendid condition. The following day he had a normal movement, the first in two years, and the bowels continued to move naturally. The tube was removed on fifth day; primary healing. At time of report the fistulous opening had almost closed. The patient's condition was splendid, and he was gaining in weight steadily.

L. J. MITCHELL.

Connell: Etiology of Lane's Kink, Jackson's Membrane, and Cæcum Mobile. *Surg., Gynec. & Obst.*, 1913, xvi, 353. By Surg., Gynec. & Obst.

The etiology of this condition is divided into inflammatory and non-inflammatory conditions and attention is drawn to the difficulty in differentiating between them. The inflammatory condition may follow or be independent of the kink or membrane. The author considers non-inflammatory factors as they offer rational explanation for the typical cases. He considers the question as to whether these conditions are acquired or congenital and discusses the views of Lane, Martin and Mayo. He advances a theory in which he considers the condition to be due to imperfect development; in support of this theory he mentions the contributions of Flint, Gray and Anderson.

After reviewing the normal, most complicated embryological maneuver, usually termed rotation

of the cæcum, attention is drawn to the fact that this so-called rotation consists in three definite elements, namely, migration, rotation, and fixation. Each of these maneuvers is described in detail and following this is given the descriptions of the possible anomalies of the three conditions which may account for the pathological entities under discussion. As to the primary cause or causes of these various abnormal or defective developments we are as yet entirely ignorant. A definite understanding as to whether these conditions are due to inflammatory or developmental condition is of the utmost importance from the standpoint of pathological treatment.

The author comes to the following conclusions: (1) Anomalous development offers a rational explanation for these conditions. (2) Coincident or resultant inflammation may cause confusion. (3) Describing the embryological changes in the ileo-cæcal region under the single term "rotation" likewise causes confusion. (4) Such changes are: migration, rotation, and fixation, one or more of which may be imperfect. (5) The Jackson or pericolic membrane may be due to excessive rotation, delayed migration, or early or anomalous fixation. (6) The Lane kink may be due to excessive or anomalous fixation. (7) The cæcum mobile is due to an absence of fixation.

EDWARD L. CORNELL.

Eastman: The Fœtal Peritoneal Folds of Jonnesco, Treves, and Reid, and Their Probable Relationship to Jackson's Membrane and Lane's Kink. *Surg., Gynec. & Obst.*, 1913, xvi, 341.
By Surg., Gynec. & Obst.

There is a striking similarity between the fœtal peritoneal fold described by Jonnesco and Juvara and designated by them "the parietocolic fold" and the adult peritoneal anomaly described by Jackson as membranous pericolicitis, and generally known as "Jackson's membrane." There is probably also a causal relationship between the bloodless fold described by Treves and a pocket-like, anomalous peritoneal reflection which is not rare in the adult, and which passes from the mural peritoneum upon the right side quite low down, extending upward and inward over the caput coli and vermiform appendix, to be attached to the last two or three inches of the ileum and to the peritoneum of the caput coli. It forms the boundary of a precolic fossa in which the cæcal head and the appendix may rest as in a pocket. It is likely that in not rare instances during operations for appendicitis the caput coli with the appendix are shelled out of this peritoneal pocket, the peritoneal fold, that is the bloodless fold of Treves, which forms the pocket being looked upon by the operator as an affair of adhesion formation.

Moreover, although conceptions of Lane's ileo-pelvic band, the structure to which is ascribed an important part in the causation of Lane's kink, are somewhat varying, it may be well in discussing the

nature and origin of this band to recall that Reid has described under the name "genito-mesenteric fold" a rather common fœtal fold of peritoneum which passes from the terminal portion of the ileum into the pelvis. Concerning this genito-mesenteric fold, which may be found in a surprisingly large percentage of fœtuses after the seventh month, or even after birth at term, the question may be fairly raised as to whether it is not related to angulations or gravitations or other deformities of the terminal ileum to which it is attached.

The parietocolic fold of Jonnesco and Juvara in most cases arises from the peritoneum at the left or inner side of the ascending colon, passing over the anterior aspect of the ascending colon in an upward slanting direction. It is attached to the parietal peritoneum at the right of the ascending colon. It may adhere to the anterior and lateral aspects of the colon. Reid ascribes to this fœtal fold practically the same relations as are presented by the parietocolic fold or Jackson's membrane when found in the adult.

The fold which was described by Reid has a secondary connection with the ileum and, through the peritoneum of the meso-appendix, with the appendix itself, a connection which perhaps is responsible for the frequent association of appendicitis and oöphoritis. In a case seen by the author, by lifting the last part of the ileum upward, a thin fold of peritoneum which was quite loose could readily be seen passing from the mesentery of the last part of the ileum, over the brim of the pelvis, to the region of the ovary. There was no sharp border of this fold upon the right side. It spread out on the right into a rather narrow fold of Treves. Reid describes this genito-mesenteric fold as passing under the appendix, whereas the fold of Treves passes over the caput coli and appendix. However, in author's cases, the inner or left border of the bloodless fold of Treves ended below in the genital gland in the fœtus, at the ovary in the female after birth, and at the intra-abdominal ring in the male at term. The genito-mesenteric fold as it was seen by Reid has not been seen by the author as a separate distinct fold, but rather as the inner prominent edge of the bloodless fold of Treves, passing from the terminal ileum to the genital gland. It is this genito-mesenteric fold of Reid, or the prominent inner border of the fold of Treves, as the case may be, which corresponds in its position and attachments to the ileo-pelvic band of Lane. The relationship between the fœtal fold and Lane's band is, perhaps, only suppositional, but it seems not unlikely that they are identical.

Concerning the origin of Jonnesco's fold, it may be said that several succeeding stages of its formation indicate that adhesions form between the cæcum and parietal peritoneum, while the cæcum is still subhepatic. The subsequent descent with torsion or rolling inward on the long axis draws the mural peritoneum over the ascending colon in a slanting direction.

Rheindorf: Appendicitis Ex Oxyure (Die Wurmfortsatzentzündung ex oxyure). *Med. Klin.*, 1913, ix, 53. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Oxyuris may be demonstrated in a high percentage of diseased appendices in childhood (in extirpated appendices in almost 50 per cent, in post-mortems 37 per cent). It occurs occasionally in adults. In these investigations the fact is to be emphasized that actual alterations due to the activity of the worms have been found in the extirpated appendices. These changes consist of superficial defects in the recesses of the mucosa. By serial section it can be demonstrated that these defects show transitions to slit-like or even total destructions of the lymphatic apparatus. In the defects and passages the oxyuris is found. Both are produced by the activity of the oxyuris. By careful examination of similar changes the percentage of so-called "normal" appendices removed will be considerably reduced. In these appendices, secondary inflammatory changes of a superficial or deeper character may be found. Contrary to Aschoff's views, these findings render probable a primary ulcerative stage of appendicitis due to oxyuris. One can also speak of an appendicitis catarrhalis superficialis in the pathologic-anatomic sense. Oxyuris carriers may therefore from time to time suffer from attacks of appendicitis. Cases without fever in which an appendectomy is made will show simple defects without inflammatory processes plus a diffuse superficial inflammation. Even when the mucosa is undermined to a large extent, all signs of the disease may be absent. Perhaps herein lies the explanation for the rapid onset of peritonitis in children, who attend school perfectly well in the morning, play on the streets at noon and in the evening develop perforative peritonitis. Possibly, also, it may explain the suppurative or sero-sanguinous peritonitis of small girls, thought to be due to disease of the adnexa. Whenever alterations are found without inflammation we must assume that the tissues have become accustomed to the presence of the parasite. Because appendicitis in children occurs frequently after infectious diseases, it might be thought that the weakening of the youthful organism by the infective process allows the parasite to continue its epithelium-destroying action, which then predisposes to secondary infection with micro-organisms. Treatment directed against the worm may, in such cases, be a double-edged sword. Still, oxyuriasis should be fought by rational therapy in practice.

ZUR VERTH.

Jackson: Retrocæcal Appendicitis. *J. Am. M. Ass.*, 1913, lx, 1285. By Surg., Gynec. & Obst.

Jackson agrees with Deaver in calling "retrocæcal appendicitis a bad type of appendicitis," on account of its serious complications and sequelæ. He divides retrocæcal appendices into four rather separate anatomic sub-varieties, as follows:

1. The appendix, possessing its usual mesentery, is distinctive only in the fact that it runs upward along the outer side of the colon, which overhangs

and confines it in the limited peritoneal space external to the colon.

2. In another type the appendix runs upward external to the colon under cover of the peritoneum of the posterior parietes, which forms its investment usually incomplete on its posterior circumference, and even though complete not furnishing a mesentery proper.

3. Again we have found the appendix running up along the external wall of the colon itself and invested by its proper tunic and likewise without mesentery.

4. In the fourth type the appendix runs upward directly behind the colon, beneath which it is buried in connective tissue entirely and has no direct peritoneal investment whatsoever.

The occurrence of an extracolonic peritonitis following a retrocæcal appendicitis may, by upward extension along the outer side of the colon, reach the under surface of the liver and reaching here it may follow around, now forward above the hepatic flexure of the colon beneath the liver, and result in a sub-hepatic abscess, or may further invade, more or less extensively, the upper peritoneal cavity beneath the liver. More commonly, following gravity, it reaches the lower fossa behind the liver, passes upward between the liver and diaphragm, and results in a subphrenic peritonitis, often terminating in an obscure subphrenic abscess.

Infection may also spread to the cellular and other retroperitoneal tissues and give rise to localized or diffuse cellulitis. In this case the colonic blood vessels may be involved in an infective phlebitis with dissemination to different parts of the body, more particularly to the liver.

The symptomatology shows some distinctive features in retrocæcal appendicitis according to the author. The initial epigastric pain and vomiting common to the ordinary variety is present as a rule without any noticeable variation. The local pain and tenderness, in this particular variety, is best elicited just above the crest of the ilium posteriorly. Abdominal or rectus rigidity so significant in the intraperitoneal appendix here is usually of transitory presence. Abdominal distension due to involvement of small intestines in peritonitis in ordinary cases is here usually very moderate or entirely lacking. The tumor, if found at all, will be outward and backward, and often present only in the loin. With the subsidence of local signs the temperature often remains at from 101 to 103 F., and the pulse is increased in corresponding septic ratio.

Jackson advocates early operation before the more serious complications manifest themselves. A posterior incision in the loin has been advocated, but he does not deem it advisable when the appendix is to be removed at the same operation, a thing he nearly always does. Posterior loin drainage through the lowest point of the lumbar fossa has lowered his mortality a great deal. In conclusion the author states that the one surgical feature for strict observation in retrocæcal appendicular abscess is posterior lumbar drainage.

R. W. MCNEALY.

Fleschi: Prolapse of the Rectum (Prolasso del retto).*Clin. chir.*, 1913, xxi, 375.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Among the various explanations for the disease, the author thinks the cause for the condition to be dependent upon a resistant pelvic floor and a lack of proper function of the lifting apparatus of the rectum. He regards with Rotter as the principal factor of the prolapse an improper condition of the closing apparatus of the rectum. He discusses the physiological act of defecation which consists in the pressure of the colon on the fæces from above, over which the sphincter is stripped with the aid of the levator. In insufficiency of the latter, caused by various factors, there is produced at first a single, and, on persistence of the condition, a permanent prolapse. The method of operation which the author has devised is based on this theory.

It consists in an incision of the skin in the shape of an equilateral triangle 7 cm. on each side on both sides of the rectum to produce a thorough scar formation. The ligaments between the levator and sphincter are severed, whereby the anal ring descends while the levator rises 6 cm. Next a muscle bundle, 10 cm. long and 3 cm. thick, of the gluteus maximus on both sides is separated from the sacral bones, which is turned in such a manner that it runs around the anal opening and is fixed with three catgut sutures anteriorly to the ligamentum arcuatum. Over this the triangular skin defects are closed. In this manner the author obtains a functional separation of the sphincter and levator, and a fortification of the perineal floor. **BURK.**

Skinner: Fluoroscopy of the Gastro-Intestinal Canal. *Lancet-Clin.*, 1913, cix, 234.

By Surg., Gynec. & Obst.

To facilitate the examination the author uses a triple bismuth meal, the first given 24 hours, the second 6 hours, and the third immediately preceding his examination. In this way almost the entire tract is filled up with bismuth and he can ascertain the topography, the peristalsis and mobility, and any defects in the entire gastro-intestinal tract as well as the result of operations and mechanical devices which may be employed. For colon examination he prefers the bismuth injection.

Among other things this method assists in the diagnosis of enteroptosis, Lane's kink with associated duodenal kink, the presence of a Jacksonian membrane and a "cæcum mobile," and may disclose a physical basis for a constipation which persists in spite of the usual treatment. **H. A. PORTS.**

LIVER, PANCREAS, AND SPLEEN**Boyd: Non-Parasitic Cysts of the Liver.** *Lancet*, Lond., 1913, clxxxiv, 951. By Surg., Gynec. & Obst.

These cysts may be divided into two classes, i. e., general cystic disease and solitary cysts. General cystic disease is almost constantly associated with cystic disease of the kidneys, and rarely also of the

pancreas, lungs, spleen and brain. Out of eighty-five cases collected from the literature Moschcowitz found that the liver was affected alone in only ten. In the slighter forms of the disease the cysts are generally found just beneath the liver capsule, but when the condition is well marked the whole organ is affected and may be enormously enlarged. Microscopically the cysts are found to be lined by a layer of epithelium, which is columnar in the smallest cysts, but as the cavity increases in size the epithelium becomes cubical and finally flattened. The contents of the cysts consist usually in a clear, watery fluid, but it is sometimes yellowish-brown in color. In an early case, besides the macroscopic cysts one generally finds on microscopic examination a greater number of bile-ducts than are normally present in the liver. The author collected a series of eighty-eight cases, of which two were foetal, seven in newly born children, four occurred in the first year and one in the eleventh year. The other seventy-four cases occurred in adults, mostly in people over sixty. All the cases in infants were multiple, and all were associated with other defects.

The following is a brief summary of other theories which have been brought forward to explain this disease:

1. That the cysts are formed by degeneration of liver cells.
2. That the cysts are due to dilatation of normal bile-ducts which have been occluded by inflammatory connective tissue.
3. That the condition is due to an overgrowth of bile-ducts or "biliary angioma."
4. That the cysts are tumors, cysto-adenomata, of the bile-ducts.
5. That the cysts are formed by tumor formation from embryonic remains.

The condition of general cystic disease is, of course, not amenable to treatment, and is more of pathological than of clinical interest. In some cases, however, the largest of the cysts have been dealt with surgically, under the impression that a solitary cyst was present. Solitary cysts of the liver, on the other hand, are of considerable clinical interest, as they often produce well-marked symptoms and are usually amenable to surgical treatment. Although the term "solitary cyst" is a convenient one, it will be found that in many cases of apparently solitary cyst the liver tissue adjacent to the cyst wall contains potential cysts in the shape of acini lined by epithelium, and in some cases actually small cysts in addition. Solitary cysts may occur in children, but most of the reported cases have occurred in adults. The author abstracts many cases selected from the literature on the subject and gives in detail a report of his own case, which was undoubtedly one of those rare cases of hepatic (presumably solitary) cysts of non-parasitic origin.

The most striking point in the clinical features of solitary non-parasitic cysts of the liver is the great preponderance of the condition in the female sex.

Of the thirty-four cases collected in this paper twenty-four were females, four are stated to have occurred in males, while the sex is not stated in six, i. e., out of twenty-eight cases in which the sex is stated nearly 86 per cent were in females. Age of the patients is stated in twenty-six. The youngest was Shaw and Elting's case, which was 18 months old. Miller's case was operated on at the age of three, but the abdomen had been noticed to be enlarged at birth. The oldest was 75.

As regards the clinical signs and symptoms, pain does not appear to be a very marked feature. Dyspepsia and vomiting occurred in several cases. Jaundice occurred in only one case. An abdominal swelling, in most cases diagnosed as a cyst, was present in all of them. Fluctuation was generally readily obtained. Enlarged superficial abdominal veins were not noted in any case except his own.

Prognosis: If curable, the prognosis of non-parasitic cysts of the liver is not unfavorable. That of general cystic disease is, of course, very bad, especially if associated with cystic kidneys.

Simple puncture should not be performed. Of the cases collected in this paper, and in which surgical treatment was adopted, recovery occurred in twenty-three.

DONALD C. BALFOUR.

Delbet: Angioma of the Anterior Surface of the Liver; Removal After Hepatic Resection; Cure (Angiome du bord antérieur du foie; extirpation après résection hépatique; guérison). *Paris chir.*, 1912, iv, No. 10. By Journal de Chirurgie.

A woman, 59 years old, had in her epigastrium a tumor mass extending into the abdominal cavity which was about the size of an orange, had a nodular surface, was movable transversely and had developed quite rapidly. There was no history to account for it. A probable diagnosis of malignant tumor of the stomach was made.

A midline incision was made in the abdomen and enlarged by a cut to the right. Delbet found a tumor attached to the liver by a pedicle the center of which was at the point of attachment of the falciform ligament to the anterior lobe of the liver. The umbilical vein crossed its posterior surface. The falciform ligament and the first three centimeters of the suspensory ligament were dissected free and the pedicle of a tumor 6 cm. in diameter was cut after hæmostasis was secured by a tightly tied continuous suture of heavy catgut. The abdomen was closed without drainage. Normal recovery.

The tumor weighed 150 grams, was 10 cm. in breadth, 8 cm. in height and 6 in thickness. It was bluish violet in color with some grayish white trabeculæ on its surface.

On the surfaces made by sectioning the tumor were found cavities filled with black material—apparently coagulated blood. Microscopically, the tumor was composed of a number of cavities containing normal blood, lined with a continuous endothelium, and embedded in a dense fibrous stroma.

It was a simple angioma simulating a cavernous hæmangioma.

J.-L. ROUX-BERGER.

Bain: Gall-stone Disease; Medical Treatment. *Practitioner*, Lond., 1913, xc, 538.

By Surg., Gynec. & Obst.

It is the author's belief that the primary and essential factor in the treatment of this affection is the rectification of the digestive functions. The administration of drugs is erroneous, as the contents of a normal bladder will dissolve any gall-stone under aseptic conditions. After correcting the digestive errors, the administration of urotropin or other disinfectants is indicated. The lower intestine should be cleaned out thoroughly.

The diet should be kept within the patient's power of digestion, restricting fats and carbohydrates and prohibiting alcohol. Regular meals, regular hours, and regular exercise are routine measures especially adaptable to this disease. In intestinal indigestion he administers pancreatic preparations combined with sodium sulphocarbonate, sodium bicarbonate, and nux vomica half an hour before meals. Mental tranquillity should be sought. If there is hyperchlorhydria, olive oil is given. Tenderness over the gall-bladder is treated by mustard-bran packs. After the digestion is corrected, he administers cholalin and urotropin.

The author believes that gall-stones can be cured without operation if treated in the early stage. Among the predisposing factors he mentions sedentary habits, stagnation of bile in the gall-bladder, overeating, irregular meals, alcoholism, anxiety and worry, indigestion, constipation, tight lacing, Glénard's disease, cardiac disease, emphysema, granular kidney, and pregnancy. Each of these are then taken up in more detail. He states that it is generally believed that the exciting cause is microbic infection, particularly those bacteria which produce acid. Stone formation precedes the inflammatory process, but infection of the bile passages is a necessary factor in the production of gall-stone symptoms.

His method of palpating the gall-bladder is as follows: the right hand is placed immediately beneath the ribs on the right side and the patient told to breathe quietly for a minute or two. The hand sinks deeper with each expiration, so that the presence of a tumor or very tender gall-bladder can, as a rule, easily be detected. In the majority of mild cases, tenderness of the gall-bladder cannot be detected in this way. The patient is then asked to sit up and to bend slightly forward. The examiner sits or stands behind the patient and places his right hand under the costal arch; with the abdominal muscles completely relaxed he can then palpate the liver quite easily. In neurotic patients, where the statements cannot be depended on, the gall-bladder is approached from the left side and then from the right. The tenderness of the early stage is circumscribed and does not extend below the ribs. When it is detected in a line from the umbilicus to

the costal margin, the peritoneal investment of the gall-bladder has become involved and the affection has passed beyond the initial stage. With the patient sitting, spasm of the diaphragm can also be elicited by asking the patient to take a deep breath, when if the gall-bladder is sensitive inspiration will be cut short suddenly. This is a sign rarely absent in advanced cases of cholelithiasis.

EDWARD L. CORNELL.

Kehr: A Review of Two Thousand Operations on the Bile Passages; a Comparison of the Results in the First and Second Thousand (Rückblick auf 2,000 Operationen an den Gallenwegen; Eine Gegenüberstellung der Erfolge des ersten und zweiten Tausend). *Deutscher chir. Kong.*, 1913. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In operations on the bile passages, the total mortality is 15.7 per cent. If, however, the severe complications are excluded (carcinoma, biliary cirrhosis, septic cholangitis), the mortality rate is only 5.4 per cent. If only simple stone cases are considered, the mortality is still lower, only 3 per cent. The total mortality rate of the first thousand cases was 16.2 per cent; that of the second thousand 17.2 per cent and that of his Berlin practice (380 cases) 18 per cent. The reason for the gradual yearly increase in the mortality rate is due to the fact that more severe cases were included. In the first thousand, the severe cases numbered 12.9 per cent; in the second thousand 17.8 per cent, and in the 384 Berlin cases, 20 per cent. In the second thousand cases, the mortality rate in pure stone cases was a little lower than that of the first thousand.

Since the use of the T-drain in his second thousand cases, the mortality rate has gone down 3 per cent. Among the first thousand there were 202 cases with a mortality of 5 per cent; and in the second thousand, 333 cases with a mortality of 2.1 per cent. In the first fifty choledochotomies, the mortality rate was 10 per cent. The total mortality rate corresponds to the percentage of the severe complications plus the two to three per cent mortality of the simple stone cases. No more cases of operative peritonitis develop, even if he operates without gloves and mask. There were no wound abscesses of any severe nature, if the panniculus adiposus is not sutured. Two things, however, are still necessary: a safe anæsthetic and the prevention of hæmorrhage in icteric patients. The safest procedure against hæmorrhage is the early operation of icteric patients.

KATZENSTEIN.

Sasse: Anastomosis Between the Cystic Duct and Duodenum (Über Choledcho-Duodenostomie). *Arch. f. klin. Chir.*, 1913, c, 969.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Up to the present time anastomoses between the bile ducts and the intestines have been made only upon absolute indication. Regarding the question as to whether relative indications for an anastomosis exist there are necessary the conditions that drainage

for the bile may be made as natural as possible and that the procedure may not be more complicated than the already extensive primary operations and not made more difficult and dangerous. These demands are filled only by anastomosis of the cystic duct with the duodenum. By it the bile enters the intestine almost in its normal place and so can fulfill its physiologic function in digestion. Its flow is continuous; stasis and resultant ascending infection of the gall-bladder are impossible. Existing infections are put under a favorable condition for healing by the regular discharge of the bile. On the other hand, using the gall-bladder for anastomosis produces unnatural conditions which, as is seen from the literature, lead in some cases to an infection of the gall-bladder and ascending cholangitis. For the treatment of conditions of infection of the cystic duct and the bile system, as it exists in stone in the cystic duct, also in cholangitis without concretions, the method of incision of the gall-duct and cystic duct with subsequent drainage was used universally. The following were given as the reasons for this method of treatment: first, elimination of the infected secretion; second, removal of the stasis of bile; third, possibility of local treatment of the gall passages by irrigation; fourth, the ability to remove possible remaining stones. Critically examining these points in favor of drainage of the cystic duct, especially when compared with the suggested method of anastomosis of the cystic duct with the duodenum, the following conclusions can be drawn: Point one is untenable because the organisms which infect the bile are normally present in the intestine and are, therefore, harmless, when the bile is allowed to reach the intestine through the anastomosis. Point two: the removal of stasis, the main point, is attained more completely by the method suggested than by drainage. Point three is of minor importance because healing is dependent much more upon free drainage of the infection. An irrigation which reaches the gall passages higher up would have to be done under such high pressure that an infection might be driven upward. Irrigation can hardly have an effect on the papilla through a narrowed cystic duct. Point four is of no importance; a stone which may have been left behind can easily gain entrance to the intestine through the anastomosis, but if it slips past the anastomosis toward the papilla it becomes entirely harmless, because it can produce no stasis of bile. Drainage can offer no advantages but often has disadvantages, as for instance the great loss of bile, which is very important for digestion; at the same time there is loss of water to the body; the danger of decubitus, with following contraction of the passages, kinking, etc., is present. The long-continued treatment of the wound and all this is done away with by the anastomosis. Not in every case of choledochotomy should an anastomosis be done. An anastomosis is indicated only when the flow of bile is hindered. Naturally the stones are always removed. If the flow of bile through the papilla is entirely unhindered and

if there is no severe infection of the bile passage present, a primary suture of the cystic duct is performed. To determine the permeability of the papilla, sounding is not sufficient, but physiological salt solution must be injected toward the intestine into the cystic duct with a rubber drain and sterile syringe. If the solution flows off freely the primary suture is inserted. If the solution accumulates or runs backward partially there is a hinderance to the outflow of bile and an anastomosis should be made. It is also indicated when there is a possibility of smaller stones higher up in the liver. The technique of the operation is as follows:

The anastomosis is made most easily at the point where the cystic duct runs behind the duodenum. The upper border of the duodenum is separated somewhat and pulled downward, and an incision is made in the cystic duct longitudinally at this point 1-1½ cm. long. The stones are removed and the bile passages are carefully examined. Opposite the longitudinal incision of the cystic duct there is made a transverse incision of the duodenum. The two openings are united by catgut suture running through the entire thickness of the walls; over this is put a silk suture uniting the serosa and going through the muscularis. The duration of the operation is from ten to fifteen minutes. By stroking the duodenum downward it is so compressed that it is practically empty of contents; finally sufficient tampons are introduced.

The author removed the gall-bladder in all cases and tied off the cystic duct near its origin, cut it off and sewed it over. The anastomosis cannot be used in cases in which there is an extensive severe purulent cholangitis, because of the general condition of the patient and because the high grade inflammation of the wall of the cystic duct will not permit a suture to heal. In this case, drainage is more serviceable. Obesity, as well as a rigid bulging thorax with a liver highly placed, may make an anastomosis a difficult procedure. The author has performed eleven anastomoses, the first two years ago. The results are lasting and good in all cases. The icterus disappeared rapidly and never returned and fever also was reduced at once. The suture held in nine cases; in two cases there was secretion of bile for a time without, however, any after effects, other than protracted healing of the wound. The author gives the following conclusions: The anastomosis of the cystic duct to the duodenum in cases where there is an absolute indication, and when it can be carried out, is the method of choice. In a relative indication, especially in recurring cholangitis with or without stones, and in inflammatory stenosis of the papilla, it is far preferable to the drainage of the cystic or hepatic duct, and deserves application in the fullest measures because it is better than any other method in producing a free drainage of bile and guarding against recurrences. Observations have shown that so-called recurrences following radical and properly performed operations do not often depend upon stones which were left behind

or newly formed, but upon stasis and infections following stenosis of the papilla. **UNTER-ECKER.**

Remsen: Acute Perforative Cholecystitis Complicated by General Peritonitis. *Surg., Gynec. & Obst.*, 1913, xvi, 386. By Surg., Gynec. & Obst.

The rarity of acute perforative cholecystitis associated with general peritonitis is pointed out and its dangers illustrated by two of the author's cases. The symptoms were those of an acute abdominal calamity associated with an area of increased tenderness appearing in the right iliac fossa, which in one case led to a tentative diagnosis of acute appendicitis. In both the operation revealed bile-tinged fluid, free in the peritoneal cavity, and a demonstrable perforation in the gall-bladder. Infection, swelling of the cystic duct mucosa, distention of the gall-bladder, necrosis of the wall due to infection, circulatory disturbances or even direct pressure of calculi are regarded as the cause of the accident. In each the mucous membrane of the gall-bladder was swollen, hæmorrhagic and gangrene was present in one of the cases. Careful attention to detail and the consideration of the various possibilities in the physiological group of organs in the gall-bladder region are insisted upon as determining operation in the early stages. Later when spreading peritonitis occurs many of these possibilities may be eliminated and one is brought much closer to the real diagnosis. When, in the late stages, the general abdominal signs and symptoms blanket the local features, the importance of a careful far-reaching history is shown.

Operative features are discussed and important to note is the very small class of cases showing acute abdominal signs in which bile is found free in the peritoneal cavity yet an apparently intact bile tract is presented. In both the author's cases the perforation was used as an opening for the drainage tube.

The responsibility involved in watching an acute gall-bladder subside is pointed out and a warning given of this rather rare but serious outcome.

Gosset and Desmarest: Cholecystectomy from Rear to Front (De la cholecystectomie d'arrière en avant). *Presse méd.*, Par., 1913, xxi, 205. By Journal de Chirurgie.

Gosset published, some time ago, a method of performing cholecystectomy by beginning at the cystic duct and working to the fundus of the gall-bladder, which he considered the best for ablation of the gall-bladder. In this article, based on a series of thirty-two operations, he dwells especially on the indications and contra-indications of this procedure. The question as he presents it is as follows: In the course of an operation the necessity for ablation of the gall-bladder may occur either when it alone is involved or in conjunction with opening the common duct. The question then arises as to the best method to be employed.

When there are many dense vascular adhesions,

when the gall-bladder is retracted and chronic peritonitis under the liver is very marked, it is often very difficult to remove such a bladder, and, if one succeeds, it is by atypical manœuvres. In these complicated cases experience alone will accomplish the object with more or less ease. But in a case presenting no more than ordinary difficulty, the adhesions being separable and the surgeon having access to the inferior surface of the gall-bladder and the cystic duct, he may employ one of three methods of cholecystectomy. First, that of opening and cutting its inferior wall and slitting the cystic duct from one end to the other. This procedure should be adopted only exceptionally. It is of advantage in a markedly atrophied gall-bladder in order to reach the end of the cystic duct and to permit the removal of an incarcerated stone, but it is really a makeshift. One ought to try to remove the gall-bladder and cystic duct completely. The cases where one is compelled to give this up will be more and more rare as one recognizes better the advantages that primary section of the cystic duct offers. The second method, or the classical cholecystectomy, consists in separating the gall-bladder from its base towards the cystic duct. It is a good procedure and a natural one since the base of the bladder presents first. But in cholecystectomy by liberating the base first, it is sometimes necessary to find a plane of cleavage between the surface of the gall-bladder and the liver, dissecting with knife or scissors, and fearing that the gall-bladder may be opened, the surgeon has a tendency to penetrate the liver tissue, which leaves the surface of the liver rough and oozing more than after retrograde cholecystectomy. Besides, in separating the bladder from its fundus towards the cystic duct, one meets the ramifications of the arteries. The main stem of the artery will then be cut several times. Finally, when the separation has been accomplished, if one pulls strongly on the gall-bladder and cystic duct the hepatic duct is drawn up and bent at an angle so that there is danger of cutting it. Both Kehr and Gosset have had this experience.

The third method consists in beginning at the cystic duct, severing it and primarily separating the gall-bladder from the neck towards the fundus. According to the authors, it is the method of choice when one can easily recognize, isolate, and sever the cystic duct at its entrance into the hepatic duct. In a fat man with a wide thoracic base, a liver high up and a small gall-bladder, the procedure is at times not feasible. In the women, especially if thin, with a low, easily-movable liver, if the gall-bladder is not too much atrophied, retrograde cholecystectomy becomes a very simple procedure. If the authors' technique is mastered this operation is practicable in about two cases in three.

In the thirty-two cases in which the retrograde cholecystectomy has been practised the authors have not encountered a single mishap. All have been cured. The operation has been more rapid, more certain, and hæmostasis of the pedicle of the

gall-bladder has been accomplished in a thoroughly satisfactory manner. In those suffering from jaundice the hæmostasis should be especially careful. Moreover, the authors have been able to diminish progressively both the size of the drain and duration of drainage and they hope in many cases to be able to do away with drainage altogether. J. DUMONT.

Delfino: A Peripancreatic Cyst Between the Leaves of the Transverse Mesocolon (Über eine peripankreatische zwischen den Blättern des Mesocolon transversum entstandene Cyste). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 280.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The cyst was observed in a man 48 years old and had attained the size of an adult head. The diagnosis could be made before the operation from the relationship of the tumor to neighboring organs and from the results of exact examination of the stool and urine, which permitted the assumption of normal function of the pancreas. Histologic examination of the cyst wall showed there was no epithelial lining. Chemical analysis showed the absence of ferment in the cyst content. The author therefore takes for granted that the cyst did not originate in the pancreas and probably was the result of a trauma which the patient had sustained at the age of 17 (marble block falling on his abdomen). The cyst was fastened by suture to the abdominal wall and drained. Cure resulted. It is remarkable that the patient suffered from severe itching of the skin. This, however, disappeared after the operation.

MOSZKOWICZ.

Weidman: Aberrant Pancreas in the Splenic Capsule. *Anatomical Rec.*, 1913, vii, 133.

By Surg., Gynec. & Obst.

This interesting anomaly was first encountered during the microscopic examination of material from an autopsy. The specimen was from a woman 22 years old who had died of general peritonitis following a suppurative endometritis. The viscera showed changes due to a severe toxæmia, but no neoplasm was found.

The pancreatic elements lay in a thick capsule the deepest layers of which consisted of dense connective tissue fibrillæ. These fibrillæ were more loosely arranged as the surface was approached and contained few nuclei of a young type. A serosa could be traced in places, but was masked by the general fibrinous exudate. All through the capsule were the foci of pancreatic cells. Duct arrangement was present and typical islands of Langerhans.

To explain the phenomenon, adhesion of pancreas and spleen was suspected. However, the microscopic picture did not support this. The only way to account for the finding was by assuming a diversion of embryonal pancreatic cells from their accustomed route. In this connection, a guinea pig's spleen was examined in which structures were found strongly suggestive of pancreas.

The variation is not uncommon. Warthin in

1904 collected forty-nine cases. One of the early investigators stated that, in certain animals, the pancreas occurs normally in separate portions. Thus, in the mole, lobules are found distinctly removed from the main organ. In pelobates parts of pancreas are found in the walls of the stomach, and, in the salamander, in the walls of the jejunum.

To Warthin's cases Weidman was able to add 19 from the literature. Summarizing all these the locations were as follows in 68 cases:

Wall of stomach.....	17
Wall of duodenum.....	14
Wall of jejunum.....	20
Wall of ileum.....	3
Wall of intestine.....	1
Diverticulum of stomach.....	1
Diverticulum of jejunum.....	1
Diverticulum of ileum.....	6
Meckel's diverticulum.....	4
Umbilical fistula.....	1
Mesenteric fat.....	1
Great omentum.....	1
Hilum of spleen.....	1
Capsule of spleen.....	1

The sizes varied from .4-9 cm., averaging about the size of an almond.

The pancreas starts to develop in the second month of foetal life by projecting its hypoblastic buds into the ventral and dorsal mesenteries. Zenker assumes a separate anlage for the pancreas and for each accessory one if present. Warthin thinks that projecting buds of the sprouting pancreas are snared off by surrounding mesoderm and carried to aberrant positions to which Adami adds that the cells must be so far differentiated that they are capable of producing only one type of tissue. Weidman thought Warthin's theory the most reasonable.

W. G. BUHLIG.

Morone: Transpancreatic Choledocholithotomy; Clinical and Anatomical Study (La cholédocolithotomie transpancréatique; étude clinique anatomique). *Riforma med.*, 1913, xxix, 174.

By Journal de Chirurgie.

In operating on the common bile duct the transpancreatic route is least used. Terrier has employed it twice and MacGrand, Kraske, and Tansini have each used it. It is scarcely mentioned in most monographs on these subjects.

Delageniere, in his report in 1908, considers it as not having much of a future. The author reports the operations of this kind which were performed by Tansini.

He considers the transpancreatic choledocholithotomy of interest; it is indicated when the local conditions prevent the use of the transduodenal or retroduodenal routes. Finally, it facilitates drainage of the common duct.

AMEVILLE.

MISCELLANEOUS

Hunter: Coeliotomy in Infancy and Early Childhood. *Am. J. Surg.*, 1913, xxvii, 104.

By Surg., Gynec. & Obst.

The author states that the surgeon who operates on children should not overlook the following:

1. While the child may take the anæsthetic well for a short period, if the administration be unduly prolonged serious collapse is more common than in adults; hence there should never be permitted the slightest delay in completing any operative steps which may be undertaken, i. e., the operation should be terminated in the shortest time possible consistent with perfect technique and the observance of adequate aseptic precautionary measures.

2. The child ordinarily withstands the loss of blood badly; hence every possible precaution should be exercised to prevent and control hæmorrhage, and means should be readily accessible with which to replace such loss, if it becomes advisable or necessary, by transfusion or introduction of normal saline solution.

3. The child endures cold badly; hence the extremities should always be amply protected, and if necessary be kept warm by artificial means; care should always be observed that the body be not unnecessarily exposed, and the operation should be performed with the child on a warm-water bed, or at least in a properly heated room.

4. The child bears hunger badly; hence nourishment should not be inadequate before the operation, nor should this feature be neglected thereafter, i. e., requisite feeding must be resumed so soon as permissible after completion of the operation.

He then goes on to quote several writers and reports the results of several men on single cases of abdominal operations in childhood. The latter half of the article is taken up with a strong plea for early operations in cases of intussusception.

SURGERY OF THE EXTREMITIES

DISEASES OF THE BONES, JOINTS, ETC.

Pirie: Re-formation of Bone after Resection. *Edinb. M. J.*, 1913, x, 346. By Surg., Gynec. & Obst.

The author states that tubercular osteomyelitis of long bones is rare, as out of 8,800 patients exam-

ined by the X-rays in five years in the Dundee Royal Infirmary only 50 were found to be suffering from that disease.

He reports two cases in which 4 inches and 4½ inches respectively were resected from the lower end of the tibia for tuberculous osteomyelitis and shows

by successive radiographs the gradual development of new bone. In one case the bone was restored in 5 weeks, and in the second 2 years were required. In the latter case, after nearly 2 years without solid bone formation, the patient fell and fractured the new bone, when reparative process again started up very actively and the new bone was soon solid enough to bear her weight.

In cases where the upper end of the fibula was resected there was no attempt at re-formation of new bone. He discusses the results of Macewen's experiments in bone regeneration in dogs.

Pirie thinks the best results can be obtained following resection (1) by preserving the periosteum as a limiting membrane so the new bone may acquire normal shape; (2) by keeping the limb at rest to prevent twisting or bending; (3) by intentional fracture, where the regenerative process is slow, as this seems to act as a new stimulus to bone growths.

JOHN L. PORTER.

Dibbelt: The Etiology of Rickets and Calcium Metabolism (Die Ätiologie der Rachitis und der Kalkstoffwechsel). *Deutsche med. Wchnschr.*, 1913, xxxix, 551.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In contradistinction to Ribbert and Kassowitz, who deny any importance to disturbances of calcium metabolism in the causation of rachitis, Dibbelt emphasizes the fact that in florid cases of rickets the amount of calcium excreted by the intestinal tract is greater than the intake, while at the same time the amount of calcium in the urine may reach zero. Furthermore, the healing or cure of a case of rickets is accompanied by a hyper-retention of calcium in the organism, with coincident increase of calcium excreted in the urine.

These facts can not be understood unless one presupposes a disturbance in calcium metabolism. In the presence of an easily disturbed balance in calcium metabolism, any of the many harmful factors to the general economy of the infant may occasion rickets.

SCHULTZE.

Fiske: The Diagnostic Significance of the Leucocyte Count in Osteomyelitis and Tuberculosis of the Bones in Childhood. *Boston M. & S. J.*, 1913, clxviii, 606.

By Surg., Gynec. & Obst.

The object of the paper is to draw conclusions from the average white blood corpuscle counts in acute osteomyelitis and tuberculosis of bones. The author defines leucocytosis as an increase of white blood corpuscles over 9,000 in adults and 12,000 in children. After citing a number of cases of acute and chronic osteomyelitis, the following conclusions are given:

1. The routine examination in all cases of osteomyelitis is 16,000 to 17,000.

2. The count varies directly with the acuteness of the process and with the patient's condition, higher in those whose condition is poor.

3. The degree of fever is a constant variant with the degree of leucocytosis.

4. High count is significant of pus or sequestra, or poor drainage.

5. Low count is indicative of a low grade process, a long standing process, or an acute process with free drainage.

Leucocyte counts were then made in a number of cases of bone and joint tuberculosis and contrasted with those made in acute infective osteomyelitis. The leucocyte counts in tuberculous bone disease are largely negative, the evidence being against leucocytosis of any degree. The white count does not vary consistently with the acuteness or recency of the process, the temperature, or general condition of the patient, abscess or sinus formation or presence of von Pirquet reaction. Leucocytosis in tuberculous bone disease occurs in the presence of secondary pus infection.

F. G. DYAS.

Lejars: Chronic Hypertrophic Osteitis without Abscess Formation or Necrosis (Contribution à l'étude des ostéites chroniques hypertrophiques sans abcès ni nécrose). *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 465.

By Journal de Chirurgie.

Lejars reports the case of a man, 38 years old, non-syphilitic, with negative past history, who, in the last few years, noted a series of hard tumors — "bosselures" — on the right tibia, with no accompanying pain or tenderness. His gait became more and more restricted as his limb increased in size and weight; locomotion had been impossible for twelve months and patient was confined to bed for the last three months.

Lejars found the upper two-thirds of the leg twice the normal circumference. This area was covered with many hard tumors, especially on the median surface of the tibia, the largest being the size of an orange. These tumors were rounded, smooth, non-adherent to the skin, and had the consistency of compact bone. All the muscles seemed absent, save for vestiges of the calf muscles. No tenderness, ulceration or hyperæmia of the skin was found. Movements of the knee were restricted and those of the foot were lost. After eliminating the possible diagnosis of sarcoma of the tibia — by the duration, slow growth, integrity of the skin, absence of general adenopathy and general good health — Lejars diagnosed chronic osteomyelitis of an atypical form. He performed a "Gritti" intracondylar amputation. Recovery was uneventful and the stump remained in good condition.

Upon examination of a section of the bone, no sequestrum, necrosis, cavity, nor cystic condition of any kind were found. Histological investigation revealed a chronic inflammatory process and osteitis tending to tumor formation. It was not possible to determine the respective portion of the two processes. This, then, is a curious form of hypertrophic osteitis belonging to the cases which are on the border line between a chronic inflammatory condition and a neoplasm.

J. DUMONT.

Wheeler: Three Cases of Tuberculous Disease of the Lower End of the Femur Illustrating Some Points in Pathology and Treatment.
Med. Press & Circ., 1913, cxlvi, 410.

By Surg., Gynec. & Obst.

The great majority of cases of osseous tuberculosis originate by infection from tuberculous milk. In a typical case the tubercle bacilli can be traced from the milk to the metaphysis of the bone. There the disease begins and progresses along definite anatomical and pathological lines. The tubercle bacilli entering the body are deposited in the lymphatic glands, cervical, bronchial, or mesenteric. In the first case, the bacilli are carried into the pulmonary circulation through the tributaries of the jugular vein. Reaching the systemic circulation they are deposited in the metaphysis of the bones and either set up active disease or remain latent.

The slow circulation through the cancellous spaces of the bone and the free capillary anastomosis makes this a favorable site for the deposition of a tuberculous embolus. A slight injury may set free this embolus and active tuberculosis, result frequently central at first, later extending through the compact bone to the periosteum. The periosteum thickens and a thin layer of new bone is deposited between it and the compact bone. This causes thickening over the diseased area which is an early and very important clinical sign.

Tuberculous disease of the metaphysis bears a definite relation to disease of the neighboring joint, as in the elbow and hip joints. Here the metaphysis is within the capsule and tuberculosis of the metaphysis is rapidly followed by general joint infection. But the metaphysis of the lower end of the femur is separated from the joint cavity by a large epiphysis which protects it from involvement in the usual manner. This is also true of the shoulder joint. But the author cites three cases to prove that tuberculous metaphysitis of the lower end of the femur is no less frequent than in other situations.

The earliest diagnosis sign is thickening of the bone in the region of the epiphysis. A similar condition is occasionally found in congenital syphilis, but the X-ray will demonstrate the presence of a tuberculous focus and also give an idea of the extent of the operative treatment necessary.

The treatment recommended by the author in practically all cases is radical operation, but he occasionally uses non-operative measures provided the case can be carefully observed, so that in a progressive one an operation can be advised before sinus form and become infected. The method of exposing the bone and eradicating the disease by drilling, scraping and drainage is sometimes indicated. But his operation of choice is to divide the bone well above the level of infection with a Gigli's saw. The thickened periosteum is separated from the bone and the latter is wrenched away from the epiphysis. The "epiphyseal line" is not injured in any way because it is in the epiphyseal mass.

The periosteum being left intact at least serves as a tubular guide to promote regularity of growth of new bone. The X-ray shows that the bone is replaced accurately within a comparatively short time.

The author reports three cases, all septic, that were operated. In the first the lower third of the femur was removed. The boy has perfect use of his leg, normal knee joint movements and but three-fourths of an inch shortening. The second and third cases have equally good results. The treatment after operation consisted in the application of weight and pulley with lateral sand bags.

R. O. RITTER.

Iselin: Surgical Treatment of Tuberculosis (Die Behandlung der chirurgischen Tuberkulose). *Samml. klin. Vort.*, Leipzig., 1913, No. 187, 709.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has treated more than 800 cases of surgical tuberculosis since 1908 by Röntgen-rays. He witnessed the healing of cases that were candidates for amputations, while in others, having multiple foci, the focus to which the rays were applied would heal while the remaining foci were not altered. In addition to the local effects of the Röntgen-rays, there were general effects, such as increase in the patient's weight and reactions occurring in some of the distant tuberculous foci. The author concludes that there is a tubercle-antitoxin resulting from the Röntgen-ray applications that affects the local focus specifically and, to some extent, the entire body. Röntgen-ray treatments are limited by the insufficient penetrating powers of their therapeutic action, the density of bones, and the sensitiveness of the skin exposed to the rays. Though at present the technique is so far advanced that X-ray burns can be avoided, yet of late ulcerations have been found in patients who were exposed to Röntgen-ray treatments years ago; these ulcerations must be regarded as remote ill-effects of the rays and there is no method known that will act as a safeguard against such unfortunate sequelæ. The possibility of injury to the epiphyseal lines of bones in children demands attention in the application of Röntgen-rays. The sun's rays exert most powerful influence upon surgical tuberculosis. These rays affect the superficial foci directly and the deeply situated ones only by their general action. The results of treatment by the sun's rays are brilliant, though to date the experiments were limited to children. Then, the sun-ray treatments, for social reasons, can be given to but a small percentage of patients; therefore the surgical procedures are still so much in vogue.

HAGEMANN.

König: Treatment of Bone and Joint Tuberculosis (Behandlung der Knochen- und Gelenktuberkulose). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The determination of the value of various procedures is possible only if the patients remain under constant observation by the clinic. This control is

feasible. Compilation of results from these sources furnishes a criterium of diverse methods of treatment. At present König shares the opinion of Garré regarding the conservative and operative treatment of tuberculosis of the various joints. The more modern procedures, however, should be considered. As the majority of patients have not the opportunity for sunlight treatment in high altitudes, a substitute should be sought for. The ultraviolet rays furnish the active component in sunlight. These rays may be furnished by a quartz-lamp. König employed exposure to these rays, at first in sluggish skin wounds, later in tuberculosis of the skin, with good results. He later extended the treatment to tuberculous bones and joints. Local as well as general exposure was employed. Local exposure was practiced for thirty minutes every third day at a distance of 30 to 40 cm. from the tubercular focus. This produced an intense reddening similar to a sunburn. The influence upon the tuberculous process was very favorable. General exposure was given daily. The naked body was exposed to the rays from five minutes to an hour, at a distance of 1 meter. Injurious effects were never observed. On the contrary, the influence of the rays was most beneficial. Locally, improvement and healing of the tubercular process was observed, the general condition improved, appetite increased, sleep became better, and the patients increased in weight. In three cases only did he notice a decrease in weight. The first of these cases was a spondylitis with secondary infection, the second had complicating vitium cordis, the third was a spondylitis in an excessively fat individual.

KATZENSTEIN.

Garré: Treatment of Bone and Joint Tuberculosis (Behandlung der Knochen- und Gelenktuberkulose). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Garré, in the last nineteen years, has treated 1,000 cases of bone and joint tuberculosis. Tuberculosis of the shoulder joint was usually treated conservatively with iodoform injection. Almost without exception a complete ankylosis remained. Only in one case in which atrophy of the caput humeri took place did the joint become movable. Resection was undertaken only in the severest cases. The later investigations of twenty-two cases showed that one half had diminished strength and two thirds diminished motion.

Tuberculosis of the elbow joint in children was treated conservatively with iodoform injection and fixation. In adults, resection was given the preference. In twenty-two cases of resection, nineteen were completely healed, and eleven had functional power with existing ankylosis. In the resection Rollier's incision was used. In tuberculosis of the wrist-joint, the results of conservative treatment were always very favorable. Resection should never be done as the functional results are unfavorable. Hip-joint tuberculosis was also treated conservatively by preference. Contractures were

brought into better position by an extensive bandage. Brisement is to be avoided. If the position was good a plaster cast was at once employed. Chloroform injections were used only in cases with abscesses. If the process was healed contracture was avoided by applying a plaster cast, leaving the knee-joints free. The healing of hip joint tuberculosis required on the average three years. Resection was avoided even when the head of the femur and acetabulum were destroyed. It was employed only for vital reasons, not to better the result.

In knee-joint tuberculosis the author prefers to resect. He has done this in 268 cases, using the Textor transverse incision. Children must wear a covering for years to avoid contracture. Of 188 cases, fourteen died, seven of tuberculosis. In the remaining cases the tuberculosis was healed in 92 per cent. In resection carried out in early life, the epiphysis is spared as much as possible, the cartilage cut superficially and in consequence shortening is not extreme. Only when the epiphyseal cartilage is destroyed by the tuberculous process is a greater degree of shortening observed. Contractures are entirely avoidable with suitable after-treatment. In 14 per cent of those investigated, stranger contractures were observed, 31 per cent had contractures up to 150 per cent, and 53.4 per cent had none. The total result in cases of knee-joint tuberculosis was extraordinarily favorable as the function of the leg, as well as the position of the knee-joint, was good (83 per cent). For this reason, knee-joint tuberculosis in children also is operated rather than treated conservatively. Ankle-joint tuberculosis (220) was treated conservatively, in 60 per cent. Resections were undertaken in severe fungous forms, in cases with a sequestrum, and with suppuration. Of 87 resections, one half were in children, one fourth in the second decade of life. The results as regards the definite cure of the tuberculosis, an especially good function at the joint, may be designated as very good (80 per cent). Finally Garré warns against the incision of abscesses because of the danger of secondary infection. Fistulæ, if possible, should be healed by resection. The author has seen few results from the passive hyperæmia and has never employed tuberculin. X-rays are not very satisfactory because the rays have not sufficient deep action in a bone and joint tuberculosis, and because of the density of the bone they do not penetrate to the diseased focus. Garré points to the brilliant results obtained by Rollier in the open air and sunlight treatment in the mountains.

KATZENSTEIN.

Schede: X-Ray Treatment of Bone and Joint Tuberculosis (Die Röntgenbehandlung der Knochen- und Gelenktuberkulose). *Ztschr. f. orthop. Chir.*, 1913, xxxi, 497.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Schede gives a résumé of the experimental principles involved in the effect of X-rays on the tissues.

He uses a dose somewhat less than that required to produce erythema, and avoids using a larger dose on the deeper tissues, because it is impossible to know what is going on below the surface. He refers to the work of Iselin, who, after the prolonged administration of the rays under an aluminum screen, found that injury had been done to the deep vessels. He tried the optimum dose; that is, the dose which will destroy the foci of disease and stimulate without injuring the surrounding tissues. In order to avoid disturbances of growth, he does not treat children under five years of age. In older children the normal epiphyses are not subjected to the rays, but the diseased ones are. No bad effects have been observed. All forms of joint and bone tuberculosis have been treated with the rays; tuberculous fistula, even when secondarily infected, were found especially adapted to the treatment. Discolored granulations disappeared quickly and became clean and firm. He warns against treating a fungus which is on the point of breaking through the reddened skin. He has seen a severe sievelike perforation of the necrotic skin in such a case, even when very small doses had been given. A limb is subjected to the rays from all sides without any skin protection.

The best ray is obtained from tubes of 5-7 Benreist, with a current of from 0.8 to 1 M. A. The uniformity of the rays during a sitting is tested with Bauer's qualimeter or parallel spark-gaps. The desired intensity of the rays is measured with Holzknecht's radiometer. It amounts at each point of contact to about 3-5 Holzknecht units. The surrounding area is protected by plumbosininite. The distance of the focus from the skin is 30 cm.; the test body was brought into range of the cone of rays at just half this distance. After exposure to the rays from all sides there is an intermission of twenty-one days and then the sitting is repeated. As a transformer Rosenthal's universal induction coil and Simon's interrupter were used. After the Röntgen treatment, orthopædic appliances were used for rest and immobilization of the limbs. Fistulæ were rayed five days after the injection of Beck's bismuth paste. In the clinical part of his report, Schede discusses individual case histories more critically and gives instructive examples with X-ray pictures of the cases. Twenty treatments were given in severe cases. In conclusion he reports fifteen cases briefly.

SCHMITZ.

Russell: Treatment of Lime Starvation. *Med. Rec.*, 1913, lxxxiii, 517. By Surg., Gynec. & Obst.

Russell claims that rickets, tuberculosis, scurvy (infantile and adult) and many disorders accompanying pregnancy and lactation, may all be traced to lime starvation. His experience, however, is confined almost wholly to tuberculosis.

His treatment, begun in 1906, is based on the theory that lime is essential for the health of plant and animal life. An insufficient supply will result in (1) imperfectly developed organs; (2) lowered resistance to disease; (3) lack of power to repair

physiological waste; lack of power to repair injury.

Lime phosphate, per se, cannot be assimilated but must first be combined with a protein. The enzyme rennet combines lime phosphate with casein, forming caseate of lime. In man rennet occurs in the form of zymogen and its formation depends upon the presence of free acids, especially Hcl. In the absence of the latter the free ferment is invariably wanting, even though the zymogen is present. However, rennet zymogen is absent only when the secreting glands are destroyed, as in carcinoma. Only then does it become necessary to administer rennet and pepsin. The administration of acid is all that is necessary to produce the active ferment. A diminished secretion of Hcl. is brought about by many conditions of ill health and is probably the usual fault in cases which finally end in tuberculosis. It is quite probable that there are proteins other than casein that combine with lime through the action of rennet, although it has not been demonstrated.

To insure the absorption of lime it is necessary to supply lime phosphate, casein and dilute hydrochloric acid. No one alone will answer. The main sources of phosphate of lime are milk and eggs. In the treatment he advocates the milk-egg-acid mixture, which consists of two eggs, a quart of milk and four drachms of dil. Hcl. This quantity is used daily. He also uses an emulsion of mixed fats, from one half to two ounces in hot water twice daily in conjunction with rigid discipline and the usual hygienic measures.

He states further that acute tuberculous pleurisies are plastic effusions, and should be regarded as evidence of an attempt at healing rather than an extension of disease. Serous effusion is evidence of a lack of lime because the effusion is not plastic. In seven out of eighteen cases of probable pneumonia consolidation persisted for months because of the excessive amount of plastic effusion having been poured into the air vesicles. This condition cleared up after reducing the amount of milk and eggs and the omission of Hcl. He reports 61.7 per cent of apparent cures of patients treated in all stages against 20 per cent apparent cures from six well-known sanatoria.

HENRY J. VANDEN BERG.

Ely: Diseases of Joints and Bone Marrow. *Am. J. Surg.*, 1913, xxvii, 81. By Surg., Gynec. & Obst.

This article is the beginning of a series, and deals with the anatomy, physiology and pathology of bones and joints, and with acute arthritis. The author bases his conclusions upon clinical observation, and laboratory study of about 120 specimens. He maintains that there are three active tissues to be considered, namely the synovia, the marrow, and the inner layer of the periosteum, and four passive tissues, the bone, the cartilage, the ligament, and the outer layer of the periosteum, which merely manifest the changes in the other three. The inner layer of the periosteum is similar to the marrow in its functions and in its reaction to disease. The

quality of the marrow decides the location of certain diseases, whether in the shafts or at the ends of the long bones. Certain diseases affect by preference the synovia; certain others, the marrow; certain others the periosteum; certain all three without preference.

The author discounts the importance of fibrin precipitation in joint disease, and regards the cartilage as an absolute barrier to the progress of disease, as long as its nutrition is unimpaired, hence maintaining that the cartilage is never incaded directly by any morbid process in the joint cavity. Any irritation in the joint, mechanical or bacterial, causes the synovia to proliferate.

The subject of acute traumatic (aseptic) arthritis closes the article, and some of the more common injuries to the joints are described. The changes in a joint consequent to a hæmorrhage into its cavity (in hæmophiliacs) are regarded simply as a form of traumatic arthritis caused by an irritant. Gout is regarded in much the same light.

The article is illustrated by a number of excellent photomicrographs which explain the author's views and make plain his meaning.

Rich: Considerations Regarding the Pathology and Treatment of Some Common Joint Diseases. *Northwest Med.*, 1913, v, 92.

By Surg., Gynec. & Obst.

Rich emphasizes the fact that where formerly a patient with fever, rapid heart and constitutional symptoms accompanying swollen and painful joints, was supposed to have rheumatism and was given the salicylates, we now consider such as septic, toxic, or acute rheumatic arthritis. He says that ideas have changed so much that it is almost necessary to remind the profession that there is a disease, rheumatic fever. Under septic arthritis he classifies those joint conditions due to infectious agents, with their entry through the tonsils, teeth, genito-urinary tract, etc. These cases show the fever and chills found in all the most acute infections. Several joints are generally affected, being tender and swollen and sometimes containing pus. Removal of the cause gives relief. He reports a case of typhoid arthritis. The pathology is based on autopsies of pneumococcic arthritis cases and he concludes that the synovia is most often effective. The organisms were found. Many such cases are diagnosed as articular rheumatism. Joint destruction is not great. Salicylates do no good. Autogenous vaccines constitute the rational treatment. He holds that toxic arthritis is due to toxæmia from intestinal absorption and is of short duration. He reports a case in a child cured by high enemas. All cases of acute arthritis are treated by fixation in plaster for a period longer than is needed for fractures. The author thinks arthritis deformans a malnutritional disorder of bones, principally the ends, and should be called osteo arthritis. He says there is little atrophy and no constitutional symptoms; also that faulty metabolism, elimination, or

internal secretion and the menopause are causative agents. Chronic rheumatic arthritis is the terminal result of acute rheumatic arthritis of joint, with a great atrophy of muscles and is predisposed to early life. There is impaired health, irregular progress with relapses and periods of improvement. The author thinks that the best treatment for arthritis deformans is by high colonic flushings of gallons of water daily. Intestinal antiseptics help. Deformities should be corrected under an anæsthetic, if necessary, then kept at rest and baked daily in an oven. He claims to have had good results from the foregoing treatment.

C. A. STONE.

Rosenow: The Etiology of Articular and Muscular Rheumatism. *J. Am. M. Ass.*, 1913, lx, 1223.

By Surg., Gynec. & Obst.

Rosenow in this preliminary note sets forth some very interesting results which he obtained in his work with the streptococcus group in its relation to rheumatism. Recognizing rheumatism as an acute infection he states from clinical and experimental facts that the etiology must be laid to streptococci of some variety but what particular strain is not settled. In a series of eight cases of acute articular rheumatism, all typical and not unusually severe, he isolated organisms corresponding closely to the micrococcus rheumaticus from one or more joints, and obtained positive blood culture in two out of four cases. He isolated similar organisms from cultures of tonsils in two cases. Two of his cases had distinct muscular and tendinous involvement.

In a series of experiments on rabbits, guinea pigs, white rats, and dogs, he found that these cultures were of low virulence, midway between the streptococcus viridans, and the hæmolytic streptococci and pneumococci, producing lesions very different from the latter, i. e., multiple nonsuppurative arthritis, endocarditis, pericarditis and myocarditis. Strains of culture obtained from the tonsil at the height of the attack gave the same results as those from the joint. He points out that freshly isolated cultures did not produce abscesses, but by passing them through animals abscesses were produced. By animal passage and other means he converted these strains into typical hæmolytic streptococci on one hand and pneumococci on the other hand. He also found that in the transition stages one strain from the joint lost much of its affinity for pericardial and articular lesions, but acquired pronounced affinity for myocardium and skeletal muscles.

He obtained lesions in the skeletal muscles in twelve rabbits, three dogs, and one monkey. He describes the lesions as elongated, variable in sizes, and running parallel with the muscle fibres. They contain a few leucocytes and a large number of living cocci. Microscopically they show coagulation necrosis of the fibres. The distributions of the lesions were most numerous in the tendinous portions of the extremities and flat muscles of the neck and shoulders, corresponding to rheumatism

in man. The virulent strains produced hæmorrhages into the stomach, duodenum, sclera, retina and iris. In all the animals mild arthritis and endocarditis were present, and, in most, pericarditis of a mild type. He also emphasizes the important rôle that cold plays in rheumatism, and states that exposure to cold after injections of rabbits increased the percentage and degree of the joint involvement. Injections of frogs kept at a temperature of from 22 to 25° C. with pneumococci, ordinary streptococci, and the cocci from rheumatism, shows that frogs are not susceptible to the former but that they succumb to the latter.

He finds that the rheumatism cocci grow best at a low temperature, and this may be one of the reasons why chilling aggravates so markedly the symptoms of rheumatism.

J. O. WALLACE.

Lindsay: Rheumatoid Arthritis in Children. *Edinb. M. J.*, 1913, x, 332. By Surg., Gynec. & Obst.

The author believes that true rheumatoid arthritis of the atrophic type occurs in children more frequently than is commonly supposed, and that the disease differs in no way from the adult type except that it progresses more rapidly, and that glandular enlargement is more common. He believes the condition described by Still in 1897 and known in literature as "Still's disease" is typical atrophic rheumatoid arthritis with glandular enlargements.

He believes this disease is due to infectious or toxic causes and calls attention to the fact that glandular enlargement is much more pronounced and frequent in children following infections or toxæmias than in adults. He says, "True osteoarthritis (hypertrophic arthritis) of the polyarticular variety is met with rarely, if at all, in children." The etiology and mode of onset is practically the same as in adults. Females are more frequently affected than males. The author describes sixteen cases, ten females, six males, between two and fifteen years of age, noting particularly the mode of onset. Attention is called to the tendency to symmetrical involvement of the joints, the marked atrophy, and the early tendon contractures.

Treatment by medicines, mechanical measures, diet, massage, local applications, and at spas is discussed. Special stress is laid upon complete rest of the affected joints, and equable climate, a generous diet, especially of milk, cream, butter and fats. Syrup ferri iodid, and guaiacol carbonat are recommended for medicinal treatment.

JOHN L. PORTER.

Ely: Joint Tuberculosis. *Interst. M. J.*, 1913, xx, 334. By Surg., Gynec. & Obst.

Ely defines joint tuberculosis as a proliferative inflammation of the bone marrow and of the synovia or one of them characterized by the formation of typical tubercles and caused by the tubercle bacillus. He asks: Why does tuberculosis affect the ends of the long bones and not their shafts? Various unsatisfactory answers have been given: (1) Activity

of circulation about the centers of growth at the ends of bone. This he says is inadequate explanation as it should apply to other structures in the body also. (2) Slowing of the blood stream in the capillaries of the spongy bone. If this were the case it would also predispose to all other infections. (3) Exposure to trauma. This again does not hold. Severe injuries never cause the disease. The portion of the bone where the disease starts is not exposed to trauma. (4) The most widely accepted theory is that the arteries are in the epiphysial area and arteries and a plug or embolus is supposed to lodge in these. Ely says this is a plausible theory but one that does not hold; other organs in the body having end arteries are not similarly affected, e.g., the brain. This theory would deny the possible synovial origin of the disease. Also an anastomosis is present in the ends of the bones of adults and also in the bones of the carpus and tarsus. Here tuberculosis exists. Tuberculosis exists in the ribs without regard to end arteries. Ely's explanation lies in none of these theories but in the quality of the marrow in the region of joints, which is the red or lymphoid marrow. Wherever lymphoid marrow is, here is favorable soil for tubercle bacilli. Synovia is also a lymphoid structure so particularly vulnerable to tuberculosis. Under pathology, he says, the fact must be kept prominently in mind that pure tuberculosis remains confined to the two lymphoid elements making up the joint, mainly the synovia and red marrow. When secondary infections enter in, other structures become involved. Tuberculosis may form in the marrow beneath the articular cartilage. Entrance to the joint may be attained in two ways, either by perforating through the cartilage or burrowing along to the edge of the cartilage and so into the joint cavity. A healthy cartilage is an absolute bar to the progress of the disease. Rarely the inflammation may not reach the joint but bursts through the periosteum and thence to the surface. Ely says the deeper layer of the periosteum may be likened to an external layer of marrow and so is open to invasion. This deeper layer is continuous with the synovia, as the superficial is with the ligaments. The synovia is not a distinct structure in itself and its limits are hard to define. Purely synovial cases are rare in childhood but fairly frequent in adult life. The bone itself, he says, is never invaded but reacts secondarily to the disease of its contained marrow. The cartilage suffers not from the tuberculosis but in nutrition from disease in the subjacent marrow. Ely says he has never been able to identify the layers of fibrin so often spoken of as being precipitated on the cartilage in these cases. The ligaments are only passive in the action. Speaking of cold abscesses, he says tubercles are only demonstrable in their walls when the abscess becomes secondarily infected.

His symptomatology is the usual one. He brings out the point that muscular spasm and muscular atrophy are more prominent in the bony type than in the synovial. Under diagnosis the usual differ-

entiations are made. The test of withdrawing fluid and injecting into a guinea pig is mentioned. Under prognosis, many things are to be considered and all carefully weighed. As regards function it is much better in children than in adults. Treatment, he says, brings us back again to the pathology. The two things necessary for the function of a joint are synovia and lymphoid marrow. If function be removed these two structures disappear. The disease dies out with them as they are the soil for tuberculosis. Briefly Ely recommends in adults radical, and in children conservative, treatment. Under radical are two operations: resection and amputation. The former where practical, the latter when indicated by the severity of the disease. He can see no advantage in injections of chemicals.

M. S. HENDERSON.

Porter: The Treatment of Tuberculous Joints.

Surg., Gynec. & Obst., 1913, xvi, 334.

By Surg., Gynec. & Obst.

The paper is a review of the whole subject and a clear statement of the methods of treatment which advanced thought is proving to be best. The opening paragraphs sum up the nature of tuberculous joints and the requirements necessary in their treatment. Porter impresses the three facts that tuberculosis is a self-limited disease, that it always results in deformity and disability, and the amount of deformity and disability depends on the extent and duration of the disease. To combat this disease there are three indications of treatment: First, increase resistance; second, put the joint in the best possible position for future usefulness; and third, prevent deformity.

The various methods of treatment are then taken up. Under "Mechanical Treatment" immobilization is given the chief place, and the fact is impressed that immobilization must be complete until the joint is cured in three to five years. Plaster of Paris is efficient in the early stages. Bier's obstructive hyperæmia is mentioned as a probable aid when thoroughly and efficiently carried out. Surgical treatment for fixation of a joint in adults is advised; otherwise, surgery should be avoided in every possible way. Antiseptic injections are considered practically useless. Cold abscesses should be left alone unless they interfere with the treatment of the joint; then they should be opened, evacuated and closed without drainage under aseptic precautions to prevent secondary infection. Sinuses are always the result of secondary infection. They should be treated as little as possible, except that bismuth paste is useful where there are no large cavities. Tuberculin in very small doses may be helpful.

F. C. KIDNER.

Hoon and Ross: Infections of the Hand. *Ann.*

Surg., Phila., 1913, lvii, 561.

By Surg., Gynec. & Obst.

A study of all the cases of infections of the hand treated in the German Hospital Dispensary from

April 1, 1912, to October 1, 1912, ninety cases in all.

The authors followed the treatment advised by Kanavel. They found the method so successful that they have continued to use it.

They divided their cases into:

1. Felon, 9 cases.
2. Paronychiæ, 4 cases.
3. Carbuncles, furuncles, infected blisters and cuts, with other superficial infections. Simple incision, iodine, and wet dressings prevented superficial infections from becoming deep ones in 54 cases.
4. Deep fascial space and tendon sheath infection; twenty-three cases were treated with "gratifying" results.

The anatomy of the fascial spaces where pus might accumulate, as described by Kanavel, was made use of.

1. The tendon sheaths of middle, index and ring fingers, extending from the distal phalanx to a line joining the ulnar end of the distal palmar crease and the radial end of the proximal palmar crease—"Kanavel's Line."

2. The tendon sheaths of the flexor longus pollicis and radial bursa extends from the base of the distal phalanx and when connected to the radial (as it does in 19 out of 20 cases, Poirier) it extends to the lower end of the radius.

3. Tendon sheath of the little finger and the ulnar bursa, when connected (as they are in 50 per cent), extends from distal phalanx to lower end of ulna.

Incisions used in opening fascial spaces and tendon sheaths:

1. Tendon sheaths along proximal and middle phalanges are opened laterally. If drainage is insufficient lateral incision is made along proximal interphalangeal joint.

2. The thenar sheath may be split up to a thumb's breadth distal to the anterior annular ligament, to avoid cutting motor nerve and loss of apposition of the thumb.

3. The hypothenar sheath may be cut from base of little finger to the anterior ligament.

4. The ulnar or radial bursa above the wrist: one incision is made one and a half inches above tip of ulnar down to and across flexor surface of ulna. A closed hæmostat is thrust across both ulna and radius and pronator quadratus and a counter incision made where hæmostat shows beneath skin. The latter should be one and a half inches up fore-arm.

5. The middle palmar space, opened by incising into lumbrical canals preferably between middle and ring fingers, may be made one and a half thumb breadths up palm and a hæmostat thrust beneath the deep flexors into middle palmar space.

6. Middle palmar and thenar space: a hæmostat is pushed through incision just described for opening middle palmar space, across the middle metacarpal bone and through the thin partition between this space and the thenar space and on across the adductor transversus muscle to the dorsum between

the first and second metacarpals at about middle of the second metacarpal. Counter incision is made here and drained for eighteen hours.

7. Mid-palmar combined with subaponeurotic: incision is made between middle and ring metacarpal where palmar crease crosses, a hæmostat is thrust to dorsum and counter incision made.

8. Thenar space, may be opened by one incision on radial side of second metacarpal opposite middle of bone and on a level with flexor surface. A hæmostat is thrust through into thenar space as far as middle metacarpal and no further.

9. Subaponeurotic space, dorsal incision in interosseous spaces.

10. Hypothenar space, by simple incision.

The average of the 23 cases was 28 years; and time of treatment after onset was 6 days.

Nitrous oxide and oxygen was used in eighteen cases, ether in five. The preliminary bandaging of fore-arm with gradual release and irrigations were abandoned as unnecessary. In cases of incision of tendon sheath the hand and fingers were held in extension with a wooden splint until danger of prolapse was past. Passive movements were started on the second day. Exploratory incisions proved free of danger. Hot boric acid dressings for three days were followed by dry ones. There was one secondary hæmorrhage from a digital artery.

There was perfect restoration of function in eighteen cases, partial in five which had bone or tendon necrosis before treatment.

CONCLUSIONS

1. In the sixty-seven cases of simple infection all were saved from becoming severe.

2. The relation of the anatomy to infective processes as employed by Kanavel affords simple indications for treatment of any infections of these parts.

3. For the twenty-three cases of deep infection the incisions recommended by Kanavel resulted in the most perfect restoration of function with the least scarring.

4. Disregard of the danger of opening into uninfected areas caused no harm. Doubtful areas were incised before pus filled areas.

5. Bloodless operative field was unnecessary.

6. Conservative irrigation did no harm, but just as good or better results were obtained by washing off what pus could be brought to the surface by gentle pressure.

7. Passive movements of fingers in a day or so were free of danger and greatly aided after usefulness.

8. Dorsal incisions were rarely needed. Redness and œdema is common and tempts the "uncertain practitioner" to incise and poultice pus free areas.

9. Hot wet boric dressings, dorsal splint, flat dam rubber drains were used—never tubing.

10. All cases without necrosis of bone or tendon when first seen recovered perfect function.

DONALD GORDON.

FRACTURES AND DISLOCATIONS

Estes, Huntington, Walker, Martin and Roberts: **Fractures; Preliminary Report of Committee.** *Tr. Am. Surg. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The scope of this investigation includes the following points:

1. The value of the treatment of recent closed fractures of the long bones by non-operative methods and the treatment of the same lesion by operative method.

2. The value of operative and non-operative treatment of recent open fractures.

3. The comparative value of these two methods in vicious union and non-union of closed fractures.

4. The use of the X-ray.

5. The percentage of patients able to return to work without disability.

A synopsis of the work done by the Committee of the British Medical Association is given in some detail as follows:

1. That it is possible to obtain a large per cent of good results by either operative or non-operative treatment except in fractures of both bones of the forearm.

2. Operative treatment of fractures requiring special skill and facilities to prevent sepsis (a considerable proportion of failure of operative treatment is due to sepsis).

3. That the mortality of the operative treatment of closed fractures in good hands is negligible. (However, to those unable to avail themselves of the proper asepsis, the non-operative method is likely to remain more safe and serviceable.)

The report next discusses the variable factors which must necessarily enter into a statistical study, such as local complications with injury to the skin, nerves, muscles and blood vessels.

The paper then discusses the two chief methods of non-operative treatment of fractures; namely:

Prolonged continuous immobilization of the seat of fracture and adjacent joints by external application of rigid splints or dressings. This may be called the "immobilization" method.

Immediate gentle massage or friction, relaxation of displacing muscles, with almost no fixation, and very early mobilization of the neighboring joints. This is known as the Lucas-Championnière method.

In the United States neither of these methods has recently been employed, but the intermediate method is probably much more frequently adopted in the treatment of fractures.

The report next defined what is meant by non-operative treatment, as follows:

1. Immobilization method.

2. Mobilization method.

3. Operative method. This consists of incising the soft parts so as to disclose the seat of fracture and permit the application of splints, screws or wire directly to the fragments. (The treatment of malunion or nonunion of fractures is not discussed.)

The report next sets forth the difficulties attending a statistical analysis, mentioning the fact that for such a report to be worth much, surgical attendance during the various fractures, should be equally skilled, the fractures identical in character and situation, and the patients similar in temperament and environment.

X-ray examination should be made, and reduction attempted under anæsthesia. After a few days the reduction should be confirmed by X-ray, and attention given to active and passive motion of the joints. Prolonged abstinence from weight-bearing must be insisted upon in fractures of the lower limb.

The committee next discusses the following questions:

What should be the routine treatment for the average general practitioner and those unskilled in surgery as a specialty?

What should be the routine treatment for the trained surgeon with the usual facilities afforded by a small or cottage hospital?

What should be the routine treatment for the skilled surgeon with adequate hospital facilities?

For all three classes of medical attendants the committee believes that prolonged immobilization with *continuous fixation* by external splints and apparatus should be abandoned because of the unfavorable complications. This method fortunately has long been abandoned by surgical experts.

For the first class, the committee suggests the study of a routine method, midway between that of immobilization and mobilization. General anæsthesia should nearly always be employed in the diagnosis and reduction of the fracture. X-ray readings should be interpreted only under the direct supervision of a man accustomed to both clinical and radiographic examination of bone lesions.

The maintenance of the reduction of the fragments should be assured by the physician. Traction, splints, or other easily removable and adjustable apparatus, should be so arranged as to allow easy and frequent inspection of the seat of fracture and to permit easy, passive, and slight active movements. Molded splints of gauze, gypsum, or other plastic material fit well and fulfill the above requirements. The watchwords for this first class of practitioners are general anæsthesia, plastic splints, or traction, frictions and frequent inspection, early mobility and delay in weight-bearing.

What should be the routine treatment for the trained surgeons restricted by the moderate facilities of small or cottage hospitals? Operative treatment should be restricted to rebellious fractures. The troublesome fractures that may, with propriety, be mentioned as probable candidates for operative treatment are:

(1) Fractures of the surgical neck of the humerus, (2) T-fractures of the lower end of the humerus, (3) fractures of the upper third of the radius, (4) fractures of the upper third of the radius with dislocation of the radial head, (5) fractures of the radius and ulna in the shafts, (6) fractures of the upper third

femur, (7) supra-condyloid fractures of the femur, (8) fractures of the tibia and fibula near the ankle occasionally.

In a general way, it may be said that operative treatment suggests itself as the preferable method in any fractures which cannot be properly reduced and retained after reduction. If operative treatment be selected, the metal plate under absolute asepsis is the final resource, unless open reduction alone, or sutures, nails, or screws be effective. The operation should be immediate—that is, within a week or ten days after the receipt of the injury.

What should be the routine treatment for the skilled surgical experts with adequate hospital facilities? To this class it makes little difference whether the non-operative or operative plan is followed. It is probable, though not certain, that consolidation of a fracture takes place a little more slowly after direct fixation of the fragments with a metal plate than in well reduced fractures under non-operative treatment.

There are certain investigations which the committee desires the fellows of the association to pursue during the next year:

1. The effect of immediate efficient reduction under general anæsthesia.

2. Mobilization with light friction. (Lucas-Championnière method.)

3. Molded splints, not circular encasements.

4. Increasing the full time of convalescence for consolidation in fractures of the weight-bearing bones.

5. Fixing standards for the determination of the probable period of absence from work demanded by treatment, and of the degree of permanent, partial, or total disability likely to accrue from particular fractures.

6. The value of straight dorsal splints or the plastic palmar splints in fractures of the lower end of the radius.

7. The value of abduction in certain fractures of the upper end of the humerus.

8. The value of *heavy* weight traction. (Vuck.)

9. The use of the Thomas knee splint in fractures of the shaft of the femur. (Jones.)

10. The use of an abduction frame in fractures of the upper third of the femur. (Jones.)

11. The value of forced abduction in fractures of the femoral neck. (Whitman.)

12. The use of double traction in fractures of the femoral neck. (Maxwell.)

FREDERICK G. DYAS.

Miller: Primary Traumatic Dorsal Complete Radiocarpal Dislocation. *Surg., Gynec. & Obst.*, 1913, xvi, 400.

By Surg., Gynec. & Obst.

There are fewer than forty reported cases of complete dorsal dislocation without fracture. Classifications are not uniform, and often reports are incomplete. Dupuytren denied even the existence of this lesion, and gave as his experience that "these supposed dislocations of the wrist turn out to be fractures." The injury occurs most often in young

male adults — those exposed to acute traumatism. Only one case has been reported above 30 years of age.

To show the screwlike action in its production Rydygier and Cameron each recite an instance in which the elbow was fixed against a wall with the hand dorsally flexed against a moving wagon. Reports in which the hand was bent *dorsally* have been made by Bays, Cooper and others. The production of exactly the same lesion due to *volar* flexion has been reported by von Brunn and Roland. Most displacements occur without a break in the integument, although this has been noted by Coteaud, Korte, and others. This is frequently followed by infection. In a few instances this lesion was diagnosed post-mortem or confirmed by operation.

In the differential diagnosis the following must be excluded: (1) Barton's fracture; (2) separation of radial epiphysis; (3) luxation of carpus; (4) the carpus upon the metacarpal; (5) fractures of forearm; (6) Colles's fracture.

Mechanically the most favorable position obtains with the hand dorsally flexed and fingers partly contracted — clawlike. The volar tendons act as a skid to elevate the carpus out of the radial socket. Spasmodic contraction of forearm muscles maintains the deformity. Displacement is exactly at the radiocarpal joint; the deformity is angular; the prominence abrupt. The hand assumes a plane parallel but posterior to the forearm. Reduction, if not simple, should excite suspicion of some complication. No mention is made of permanent disability.

The author reports a case as follows: On August 19, 1910, a young man age 30, while attempting to start the motor of a large automobile, felt a sharp pain in the region of his right wrist. He was pushing down upon the starting crank. Examination showed a backward deformity at the radiocarpal joint. Styloid process of both radius and ulna were normally located. No crepitus, but pain was elicited on motion. Reduction was easily obtained by traction. An excellent result was secured.

SURGERY OF THE BONES, JOINTS, ETC.

McGlannan: The Open Treatment of Fracture of the Femur. *Surg., Gynec. & Obst.*, 1913, xvi, 429.
By Surg., Gynec. & Obst.

The author points out that the union of a broken bone is a vital process, governed by the general laws of wound healing, and that good results in open treatment do not depend on the endurance and resistance of the plates and screws, but rather on placing the limb in the position that relaxes the muscle and inclines the fractured portion nearest a normal line. The plate is an internal splint, one whose application directly on the bone makes perfect apposition possible, but whose action is required only for the length of time necessary for the formation of firm callus. Tension strong enough to break the Hanselman silver plate, or great enough to loosen

the screws, will prevent bony union although perfect approximation is obtained.

The technique is described in detail. The method of securing traction is the only original contribution claimed. This is done by passing a long drill through the femur above the condyles and making traction on this by means of a rope of gauze passed across the front of the thigh. The advantages of this method are rapid action with employment of minimum force, consequently lessened shock. In addition the popliteal space is not subjected to pressure. In the after care of the patient thyroid extract is administered daily from the third to the sixth week to influence ossification at the point of union.

Frattin: A New Application of Free Osteoplastic Operation in Fixation of Paralytic Foot (Eine neue Anwendung der freien Osteoplastik in der Fixation des paralytischen Fusses). *Zentralbl. f. Chir.*, 1913, xl, 229.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has carried out an osteoplastic operation in the fixation of the ankle of a fifteen year old girl, with old spinal infantile paralysis, as follows: After a lateral incision, an osteoperiosteal lamella of sufficient length and maximal thickness of .5 cm. was removed with a chisel from the lower part of the fibula. This was then placed between the previously prepared surfaces of the external malleolus and the calcaneus, and was here fastened at both ends with a few silk stitches through the periosteum and the superficial layers of the bone. The operation was carried still further by the freshening of the opposed joint surfaces of the os calus and os naviculare, and by an approximation with strong silk by means of a through and through suture. Moreover, the tendons of the tibialis anticus and tibialis posticus were fixed in the region of the talocrural joint by simple suture in the strongest parts of their previously opened sheaths. Seven months after the operation the results, so far as appearance and function were concerned, were good.

BRANDES.

Schultze: The Treatment of Fracture of the Patella; a New Method of Repairing the Extensor Muscles (Die Behandlung der Patellarfraktur; eine neue Methode zur Rekonstruktion des Streckapparates). *Ztschr. f. orthop. Chir.*, 1913, xxxi, 567.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A separation of the patellar fragment can only take place if there is a simultaneous rupture of the extensor muscles at the top of the fracture. To restore the separated parts to position, the continuity of the muscles must also be restored. This is accomplished by means of the "forceps technique." The fragments are seized with a Muzeux forceps and pressed toward one another in such a way that the surfaces which are normally turned toward the femur lie almost against each other. With two other Muzeux forceps the lateral and median muscles of the patella are seized, stretched, and sewn with

catgut. Then, after removal of the forceps, the fragments are drawn back into their normal position and fastened with a periosteal suture. Bony healing takes place in this position. The skin is sutured and drainage maintained for twenty-four hours. On the tenth day, the skin sutures are removed, and the twelfth to the fifteenth day, medico-mechanical treatment is started. This gives better results than massage. In old or refractory cases, the connective tissue scar is excised and, under some circumstances, the fragments are extensively resected. Here, too, hypertension and suture of the contractile tissues is of great importance.

In nine cases Schultze obtained good results by this method. Of those who were insured against accident only one received 30 per cent of his insurance, another only one year's temporary annuity. The oldest patient (62 years) left the hospital after twenty-eight days with the knee-function completely restored.

WITTEK.

Von Wrzesniewski: Operation and Open Method of Treatment in Purulent Fistulous Tuberculosis of the Joints (Operation und offene Behandlungsmethode der eitrigen fistulösen Gelenktuberkulose). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The joint should be opened by a long transverse incision beginning at the extensor surface and, if necessary for a free exposure, bilateral longitudinal incisions should be supplemented. The joint is then opened by flexion to permit of a thorough inspection of all the parts. The tuberculous foci are excised from the bones and the soft parts. Then all cavities are thoroughly packed with mull and joint extended and immobilized in proper position, avoiding sutures of any description. At every redressing the joint is opened, the gauze removed, and all cavities carefully examined for new growths, which are excised; the packing is then replaced by fresh sterile gauze and the immobilization attended to as described supra. The more the granulation tissue forms at the base of the wounds, the greater the caution to be observed in the flexion of the joint.

The advantages of this method are: (1) The frequent possibility of making amputation unnecessary in old, advanced cases of suppurative tuberculosis of the joints. (2) Prevention of the typical resection and shortening of an extremity. (3) The possibility of a thorough inspection of the entire diseased area at every redressing and the immediate excision of any newly formed tuberculous processes. (4) The possibility, in nearly all cases, of healing the wound without the formation of a fistula that so frequently resolves itself into an annoyingly prolonged and offensive after-treatment. (5) A considerable reduction of pain at the redressings.

The disadvantages are: (1) Prolonged treatment before healing and cicatrization are completed, from 3 to 6 months. (2) The final result in the majority of cases is a complete ankylosis.

This method the author has employed, since

1901, in the shoulder, elbow, knee, ankle, Chopart, and Lisfranc joints and has had permanent results in over 50 per cent of the cases; i. e., there were no fistulæ and no relapses.

Todd: The End Result of Excision of the Elbow for Tuberculosis. *Ann. Surg.*, Phila., 1913, lvii. 430.

By Surg., Gynec. & Obst.

The difference in opinions held by surgeons as to the ultimate state of, or the changes in, a joint necessary for a cure of tuberculosis, is the excuse offered by Todd for a short contribution on this particular joint disease.

The author's report of a cured tuberculous elbow joint without destruction of joint function is not, as he states, in refutation of Ely's contention that ankylosis is the essential factor, but merely to show that a cure of a tuberculous joint may be effected with preservation of joint function.

Todd dissected the body of a female aged 59 years, whose death was due to an abscess of the right frontal area of the brain. There was an active tubercular lesion of the right tarsus and a like lesion of the frontal bone on the right side. The right elbow joint, previously the seat of tuberculosis, and on which a partial excision had been done, showed no evidence of the disease. Although the olecranon and the entire articular surface of the humerus had been entirely removed, the dissection disclosed a joint cavity, lined with a synovial membrane, filled with synovial fluid.

Histologic study by Lorrain Smith of the joint structures further demonstrated the actual presence of a synovial membrane, and the absence of tubercular disease. Todd is of the opinion that a cure of tuberculous joint disease does not necessarily call for an obliteration of the joint cavity.

WM. FULLER.

König: Clinical and Experimental Observations on Ivory Transplantation (Klinische und experimentelle Beobachtungen über Elfenbeinimplantation). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In reference to former successful implantations König reports on the method of healing and technique. With good asepsis, bones and soft parts enter into intimate union with the ivory. It is gradually replaced by bone. The behavior of the soft parts is particularly important. If, as frequently happens, extravasation of blood leads to a fistulous perforation, surrounding the ivory with a secondary muscle transplantation will be sufficient to close the fistula. This of course is not done in infected cases. The ivory must be implanted firmly in the bone, and closely surrounded with the soft parts. The larger joints offer considerable difficulties; in such cases the muscles may be sutured directly to a prothesis in the ivory.

The author adds another successful case to those previously reported. The case reported in 1912 in which the lower jaw was implanted has remained

cured. The last case was an ivory implantation into the elbow-joint (the trochlea with a piece of humerus the width of a hand being removed). The patient has been using it for a year. He moves the joint, is free from pain, can lift with the arm; and no fistula remains. König again recommends ivory for implantation in fractures and in bony defects, including joints.

Röpke: Transplantation of Fat in Joint Surgery
(Über die Verwendung freitransplantierten Fettes in der Gelenkchirurgie). *Deutscher chir. Kong.*, 1913.
By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Since his previous report in 1911 the author has been working clinically and experimentally on this subject. Clinical observation has shown that flaps of fat as large as the palm of the hand may be used in joints without any retardation of the healing of the wound. The special functional demands made on the fat flaps in the joint causes a different result in the regenerative process than if the fat had been transplanted into subcutaneous tissue, because there is a greater new formation of connective tissue between the heavily weighted and moving ends of the bone. But in places where the fat is able to persist in spite of the functional demands made on it, after some degeneration at first, normal fat tissue is found again after about two weeks. A further report will be given of the finer histological changes. Röpke operated on thirteen joints and interposed free flaps of fat. They were finger, wrist, elbow, shoulder, hip and knee joints which came for treatment of synostosis and fibrous ankylosis from old dislocations. He used Kocher's incision on the elbow-joint. There was primary healing in all cases and the functional results were good. He used free transplantation even in the operative treatment of joint tuberculosis and here, as in the other cases, obtained healing by first intention and good functional results. At the hip-joint, after removal of the diseased capsule, cleaning out the acetabulum and excision of the diseased head, the rest of the neck was moulded, the acetabulum filled with a large flap of fat and here, as in all other cases, the joint closed up and placed at rest in a plaster cast for three weeks.

After that active movements were begun which were gradually combined with other orthopædic methods. Very vigorous movements are not to be undertaken the first few weeks, in order to avoid hæmorrhage by tearing loose the flaps and thus interrupt active motion. In the knee-joint two lateral incisions, convex-posteriorly, and a T-shaped incision in the fascia are made. The lateral ligaments are separated from the epicondyles of the femur, the diseased capsule removed, the joint surface of the patella and the femur and the condyles of the tibia excised in a crescent shape. An intercondylar fossa is then made in the femur, the tibial condyles hollowed out and the eminentia capitata restored, a fat flap as large as the palm of the hand is drawn over the femur, another of equal size is fixed by sutures in the upper concavity, the lateral ligaments sutured

and the joint closed. After three weeks in a plaster cast, active movements are begun with massage of the very much atrophied extensor muscles. The position of the leg is excellent and since the extensors have not been injured in any way by the operation, eight weeks afterward the leg can be completely extended and motion take place through an angle of 45°. In a case of elbow-joint tuberculosis with old cicatrices from a fistula, the interposition of fat proved a very good method. Röpke, on the ground of his clinical and experimental investigations, recommends transplanted fat flaps as excellent material for interposition in joint surgery, even in cases where tuberculosis is present.

Lexer: Re-transplantation of Joint-Bones: Arthro-autoplasty (Rückverpflanzung von Gelenkeilen: Gelenkautoplastik). *Zentralbl. f. Chir.*, 1913, xl, 603. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

In luxation fractures which were formerly treated by removing all dislocated pieces of bone and those completely separated from their surrounding tissues, the author recommends autoplasmic implantation of such bones, reconstructing the normal anatomical relations as well as possible. The growth of such implantations is made difficult because the fragments are not placed in normal tissues. In the recent cases, the tissues are poorly nourished on account of the hæmorrhages and contusions; in old cases, extensive cicatrizations interfered with the blood supply of the segments implanted. The attempt should always be made, as in the worst cases (necrosis of the implanted parts) the result will be as good as the immediate removal of such parts would produce.

The author operated two such cases to date. The first case was an elbow-joint fracture and dislocation of two months standing. The completely separated fragment was restored to its normal location and held in place by a peg made of horn. The result was good functionally. The second case was a luxation and fracture of the humerus. The line of the fracture extended obliquely below the surgical neck. The completely separated fragment was fastened to its normal location on the humerus by silver wire and then the luxation was replaced. The result promises to be good, though the after-treatment is not completed.

VON TAPPEINER.

Allison: The Results Obtained by Implantation of Silk Tendons in the Residual Paralysis of Poliomyelitis. *Am. J. Orthop. Surg.*, 1913, x, 519.
By Surg., Gynec. & Obst.

The author discusses the operations used to produce stability in flail joints. Arthrodesis has lost its vogue, due to the poor results that have followed its use in children. Lange and Lorenz are both of the opinion that it should not be done before the patient has reached the twentieth year; then, also, the joint function of the articulation to be stiffened should be carefully considered. Considerable success has followed the use of silk check ligaments.

The author finds that best results follow the implantation of these silk cords in the sheath of paralyzed muscle tendons. For anterior leg paralysis, the silk is passed up the sheath of the tibialis-anticus and peroneus-tertius, making a loop through the tarsus, it is sutured to the tibial periosteum. A similar operation is done for paralysis of the gastrocnemius; here the silk is passed through two drill holes in the os calcis and up the sheath of the tendo-Achilles. Experimental study of the behavior of this silk in the tissues is reported. Microscopic study of two specimens given. The author reports results in twenty-five cases.

Alexander: Treatment of Volkmann's Contracture. *Ann. Surg., Phila.*, 1913, lvii, 555.
By Surg., Gynec. & Obst.

Alexander briefly discusses the pathology and various methods of treatment which have been suggested for Volkmann's contracture. Two cases are reported and the apparatus used by him is described. The author mentions the theories of the pathology of the condition: (1) that it is a contracture myositis (Volkmann); (2) that it is primarily muscular in origin with a secondary nerve involvement; (3) that the nerves are primarily at fault. Alexander believes with Thomas that the nerve involvement is not a necessary factor, but that a secondary involvement of the nerves in a connective tissue overgrowth may account for the disturbances of sensation and atrophy of muscles of the hand as seen in Volkmann's contracture.

The disadvantages of various methods of treatment are given. Alexander objects to stretching the contracted muscles under anæsthesia, because of danger of fracturing bones or rupturing tendons. Direct tendon lengthening is objected to because of danger of infection, possibility of adhesions around tendons, and length of time required to perform operation. Disadvantages of resection of bone are: (1) Weakening of extensor tendons; (2) deformity, (3) liability of nonunion; (4) infection.

The author has treated his cases with mechanical appliances, electricity, and massage. The apparatus consists of two parts. The first part is a leather casing encircling the lower half of the forearm. There is a reinforcing steel bar on each side of the forearm. The second part consists of a leather covered steel plate fitted to the palm of the hand and fingers. The dorsum of the hand is covered with a leather strap. Extending from the palmar plate to the bars on either side of the forearm cuff, there are two arched bars. At the joint formed by the two sets of bars there is a lever and a quick screw. Leather straps extend from dorsum of hand to upper end of cuff. By use of the screw the extension can be increased.

The cases to which this method was applied were fractures of the elbow which had been previously treated with anterior right angle splints. At the end of twelve weeks both patients were able to flex and extend the fingers and wrist. ISIDORE COHN.

Slawinski: Technique of the Movable Stump in Amputations (Zur Technik des beweglichen Stumpfes bei Amputationen). *Zentralbl. f. Chir.*, 1913, xl, 459. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Utilizing the definite kineplastic method of Vaughetti, Slawinski describes an amputation of the forearm by which the muscle power was retained by giving the patient a movable stump. The operation became necessary on account of chronic unyielding carpal tuberculosis.

The amputation was performed at the junction of the middle and lower third of the forearm, making a circular incision and two lateral longitudinal incisions, 7-8 cm. long. The lower half of these lateral incisions extends down only to the muscles, the upper half to the periosteum, in order to loosen the extensor and flexor muscles from the periosteum for a distance of about 3 cm.; at the same point the periosteum and bones were resected for 3 cm. The pieces of bone which remained in the stump, at this point, therefore had no direct connection with the upper portion of the forearm. In order to maintain the pseudo-arthritis which had thus been formed, the defect was filled in by muscle substance. On the dorsal surface of the radius, the musculus abductor pollicis longus was exposed, placed between the fragments of the bone and sutured to the volar surface; the musculus flexor ulnaris interior was introduced between the fragments of the ulna and fastened to the posterior surface. Further, in the stump itself, the ends of the extensor and flexor muscles were joined over the bone and sutured. Fascia and skin were then sutured independently.

In spite of the resulting muscular atrophy, the stumps can be flexed as well as extended. HESSE.

Jackson: Amputation Flaps. *Surg., Gynec. & Obst.*, 1913, xvi, 432. By Surg., Gynec. & Obst.

Jackson criticizes the present method of making flaps in amputations of the extremities. With the usual flap any of the following results are liable to be obtained: (1) The end of the bone is covered only by skin, superficial fascia leaving a conical stump; (2) tight skin over the stump; (3) retraction of the center leaving a fossa to collect dirt and infection. He suggests the following plan in making amputation flaps. Incision is made through the skin, the muscle and fascia. This is dissected back by cutting obliquely through the muscle, making a conical flap. The bone is amputated at the upper end of the reflected flap, the vessels tied and dead spaces closed. The flap is sutured over the stump by catching the deep fascia first, covering all raw muscular fibers with fascia.

The advantages of this flap are: (1) Anatomical, muscle covered by deep fascia, skin separate and movable. (2) No retraction of skin and formation of creases or fossæ for dirt. (3) Fascia holding muscles uniformly over end of stump prevents fascial retraction and conical stump. (4) Bone covered by muscle and fascia, preventing fixation to skin.

EDWARD L. CORNELL.

ORTHOPEDIC SURGERY

DISEASES AND DEFORMITIES OF THE SPINE

Murphy: Impacted Fracture of the Body of the First Lumbar Vertebra; Laminectomy; Rapid Recovery Following Decompression of the Cord. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 2. By Surg., Gynec. & Obst.

While walking in his sleep, a man of 35 fell a distance of about 12 feet, striking on his buttocks. He was unable to get up on account of pain in back; was able to move his legs, but it hurt him to do so. When put back to bed, his doctor found a prominence of the last dorsal and first lumbar vertebrae, with ecchymosis. Examination showed no paralysis but loss of sensation over buttocks, perineum, scrotum, and back of thighs, as far as knee; no loss of sensation in front of thigh; no girdle pain and no annular paralysis. Since accident he had to be catheterized thrice daily. For the past week or two control over bladder seemed to be returning. For the first four or five days had great trouble in getting his bowels to move; since then had had involuntary evacuations. For past week was getting a little control over sphincter. Examination revealed a prominence of the eleventh and twelfth dorsal and first lumbar spines. No paralysis of muscles of thighs, but calf muscles felt flabby. Tactile sensation absent over glutei and diminished on back of thighs. Superficial reflexes present. Left knee-jerk exaggerated; right slow and scarcely perceptible.

Operation showed a pronounced luxation forward of the first lumbar vertebra; the angulation was so sharp and the cord compressed so much it seemed strange there was no complete paralysis. The spinous process and laminae were removed from the first lumbar vertebra so the cord was perfectly free behind the zone of compression. The muscles were sutured across the spinal column with catgut, and outside this the lumbar fascia sutured, also with catgut, making an accurate apposition. The dura was not opened. Patient left hospital within five weeks, wearing a leather jacket. Two months later he returned for examination. He had regained complete control of his sphincters and of all muscle power, except that he could not raise himself on his toes. He returned again after two more months. He could not raise himself on his toes, but in about five months after the operation he had entirely recovered from his injury, still wearing the leather jacket.

L. J. MITCHELL.

Hatch: The Use of Corrective Plaster Jackets in the Treatment of Scoliosis. *New Orleans M. & S. J.*, 1913, lkv, 715. By Surg., Gynec. & Obst.

Scoliosis is considered from the standpoint of the general practitioner, to whom suggestions regarding early diagnosis and proper disposition of patients are given.

Technique is considered in part; two cases are reported and four illustrations appear.

The value of preliminary exercises over a period of a month before corrective plaster jackets are used is advised. The jacket is put on in suspension, "first getting the patient in as good a sitting posture as possible on an adjustable seat. . . . Rotation is corrected by bands pulling in alternate directions, with as much force as the patient can stand." The author claims good results if sufficient time and attention are given these cases.

H. B. THOMAS.

Albee: An Experimental Study of Bone Growth and the Spinal Bone Transplant. *J. Am. M. Ass.*, 1913, lx, 1044. By Surg., Gynec. & Obst.

Albee presents in this paper "deductions and conclusions" based upon experimental operations on thirteen dogs, reported in full, in conjunction with a clinical experience gained from 130 bone-grafting operations on the human subject. He concerns himself chiefly with the operation of transplanting a wedge-shaped strip of tibia into a trough formed by splitting the spinous processes, in Pott's disease. The article is illustrated with photographs of specimens showing end results.

According to Albee a bone transplant may act efficiently either by healing solidly in place and remaining in toto, or by serving as an "osteconductive scaffold" and becoming absorbed. If the graft is to live, he says, the blood supply contacts must be of favorable character and numerous distributed along its whole extent. It apparently acts always as a stimulant to osteogenesis on the part of the bone into which it is transplanted. Periosteum and marrow substance on the bone graft may serve an important rôle in aiding to establish an early and abundant supply, but transplants without periosteum give good results. In the dog the spinal graft loses its identity at about the fourth month, but a bony bridge remains. Albee states that he was unable to produce a bony bridge between vertebrae experimentally by the method of breaking down the spinous processes one upon the other (Hibbs), or by the insertion of periosteum.

The author had successful experimental results with grafts which had been kept in normal saline at a low temperature for as long as a week, and portions of a transplant became united to the recipient bone even in the presence of active sepsis. Grafts from another species did not take. He considers that its germ-resisting property and its early adhesion, by bony growth, to bone with which it is in contact, makes the bone graft superior to metal internal splints, which favor sepsis and induce bony absorption.

The conflict between the ideas of Macewen and commonly accepted opinions as to the osteogenetic function of periosteum Albee explains by stating

that the outer layer of periosteum is largely connective tissue, and that the active osteogenetic cells are in intimate contact with the surface of the bone. Dissection with a blunt instrument is not likely to be deep enough to include this osteogenetic layer. He advises accordingly the use of a sharp periosteum elevator in bone resection.

ALBERT EHRENFRIED.

MALFORMATIONS AND DEFORMITIES

Eikenbary: The Correction of Congenital Equinovarus. *Northwest Med.*, 1913, v, 97.

By Surg., Gynec. & Obst.

Eikenbary says that in his series of thirty-six cases, twenty had been previously operated without permanent correction, which proves the treatment in many cases is faulty. The causes of failure are: first, lack of overcorrection; second, retention of the support for too short a time. The proper time is until the child is walking for at least a year after final correction. Treatment is best begun at once after birth and can often be accomplished by a series of casts extending to above knee and without operation. Correct varus and adduction; first cut Achilles if need be. He believes that in severe cases in babies and in all after one year, forcible complete correction under anæsthetic should be done, working with the foot until it is flabby before applying plaster. He says the idea that Phelps' operation corrects more quickly is wrong, for support for a long time is necessary and besides it has the disadvantage of leaving a foot predisposed to become a flatfoot. He prefers to remove a wedge of bone from the outside of foot, thinking it much superior to Phelps' procedure. In the thirty-six cases, nine were discharged without supports, remaining corrected now for periods ranging from three months to three years. Three still wear supports. The above twelve began treatment under five weeks of age; eight were three to eighteen months, all corrected under anæsthesia tenotomy of Achilles only; five were cured; three still wear supports. Seven were two to five years. Overcorrection in one operation. Three are cured, two wear plaster, one wears nothing and tends to relapse, the other has been lost

sight of. Six were five to eleven years. Two only Achilles divided, four had tenotomy plus removal of wedge of bone from outside of foot. Two were cured; four under treatment. Two fourteen year old cases had Achilles cut; one cured, one wearing plaster. One twenty-two year old case of moderate deformity had great force used upon it by the bloodless method. Eikenbary says, though the result is perfect, he would do an open operation next time. Concluding, he says, there are no incurable cases of congenital equinovarus.

C. A. STONE.

Sever: Coxa Vara; Some Observations on This Condition with Especial Reference to the Question of Spontaneous Recovery from This Deformity. *Boston M. & S. J.*, 1913, clxviii, 495.

By Surg., Gynec. & Obst.

Sever cites nine cases of coxa vara accompanying knock-knees or bow-legs in which rachitis is the underlying cause. With the exception of one case, treatment was resorted to only for the knock-knees and bow-legs. The result obtained for the coxa vara condition was equally as good as in the one case receiving the usual treatment. It seems that as the coxa vara tends to return to normal, any restoration of the lower legs toward a normal weight bearing line would also have a favorable influence in hastening the above tendency.

The author's conclusions are:

1. Rachitic coxa vara is a frequent and concomitant condition of knock-knees and bow-legs, but may exist independently.
2. In this series of cases it was observed to a greater degree in knock-knees than in bow-legs.
3. The condition apparently needs no treatment.
4. The correction of a co-existing condition of knock-knees or bow-legs may hasten the process of recovery from coxa vara. This statement is made without evidence to support it.
5. In all cases there is a tendency to spontaneous recovery and a restoration toward the normal angle of the neck of the femur without treatment, with no cessation from use or weight bearing.
6. There is probably very little or no permanent disability in the average case.

C. M. JACOBS.

DISEASES AND SURGERY OF THE SKIN AND APPENDAGES

Chiari: Contribution to the Study of Free Transplantation of Fascia in the Human Organism (Ein Beitrag zu der Kenntnis des Verhaltens frei transplantierter Fascie im menschlichen Organismus). *Wien. klin. Wchnschr.*, 1913, xxvi, 287.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author had an opportunity to examine microscopically, very carefully, a piece of fascia, taken from the thigh, 8 cm. in diameter, which had been transplanted to cover a defect in the dura after

extirpation of a tumor and had to be removed after sixty days because of a recurrence. The piece of fascia showed areas of severe injury in the form of hæmorrhages, swelling and liquefaction of some of the fibre bundles; large areas, however, remained alive, which was shown by the good staining ability of the tissues and the nuclei, as well as by definite signs of circulation formation. The nourishment of the transplant was provided especially by granulation tissue which had spread from the edge over the same.

WORTMANN.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESSSES, ETC.

Hoffman: The Menace of Cancer. *Tr. Am. Gynec. Ass.*, 1913, May. By Surg., Gynec. & Obst.

On the basis of trustworthy official data, it was safe to estimate the annual mortality from cancer in the United States as 75,000 and in the civilized world at half a million. The cancer death rate in the United States was increasing at the rate of $2\frac{1}{2}$ per cent per annum and a corresponding increase was taking place practically throughout the civilized world. The average age of death from cancer in all forms was 59 years, or respectively 60.4 per cent years for males and 58.2 per cent for females. Cancer was largely a disease of adult life and the total mortality from cancer, 90.7 per cent, were deaths of ages of 40 and over. The male cancer death rate in the United States, ages 25 and over, had increased 29 per cent during the last decade and the female cancer death rate had increased 23 per cent. On the basis of past experience, the distribution of cancer deaths in the United States during 1913 would be about as follows: Cancer of the stomach and liver 30,105; cancer of the female generative organs 11,235; cancer of the rectum, intestines and peritoneum, 9,608; cancer of the breast, 6,817; cancer of the mouth, tongue, etc., 2,880; cancer of the skin, 2,670; and cancers of other organs and parts, 11,685.

These statistics fully sustained the conclusion that cancer was a most serious menace to the American people and that the tendency was toward an increase in the mortality, regardless of the cancer deaths prevented by early surgical operation. The cancer death rate of large American cities had increased from 37.2 per one hundred thousand population during the five years ending with 1876 to 80.5 per cent during the five years ending with 1911. The cancer death rate of the city of New York had increased from 37.5 per one hundred thousand of population during the three years ending with 1872, to 81.4 during the five years ending with 1912. The corresponding increase in the cancer death rate of Philadelphia during the same period of time had been from 41.3 to 86.3 per cent. At ages 60 and over in the state of Massachusetts, the mortality from cancer of the external organs for males had increased from a rate of 65.1 during the five years ending with 1910. The corresponding increase for females aged 60 and over had been from 85.6 per cent to 122.3 per cent. Aside from the observed increase in the mortality from cancer, there had been an increase in the mortality from biliary calculi in the registration area of the United States from 1.5 per cent per one hundred thousand of population in 1900 to 3.0 per cent in 1911. All the facts available for the different sections of the country

and the principal cities throughout the world sustained the conclusion, without qualification, that the menace of cancer was much more serious at the present time than it had been in the past.

The only hope for the patient lay in the early possible recognition of the symptoms of cancer, when operative treatment was a comparatively easy matter.

Walker and Whittingham: The Effect of General Contraction of the Peripheral Blood-vessels upon Mouse Cancers. *Lancet*, Lond., 1913, clxxxiv, 1010. By Surg., Gynec. & Obst.

The liquefaction and final disappearance of tumors in mice are obtained by the intravenous injection of various highly toxic materials. The theory of the treatment is based upon Ehrlich's statement that tumor cells possess a much greater avidity for oxygen and nourishment than do the cells of normal tissue. In the case of all these experiments the useful dose of the "compound" is nearly as great as that which kills the animal outright, and must be injected directly into the circulation. The immediate effect of the "compounds" injected by Neuberg and his collaborators is described as a contraction of the blood-vessels of the body and a dilatation of those of the tumor. The dilatation and contraction of blood-vessels is controlled by the nerves, and hence it is possible that when these poisonous substances are introduced into the circulation the immediate result is the contraction of the blood-vessels generally, excepting, of course, those in the tumors, through the action of the compounds upon the nervous system. The blood vessels and spaces in the tumor, owing to the increased pressure produced by the contraction of the vessels of the body, are passively dilated. The poisonous compounds, having been introduced directly into the blood stream, would thus act far more upon the tumor cells than upon those in the body generally, and as they are described as being very unstable they would tend to break down before the blood-vessels of the body again dilated.

The authors injected mice, in which tumors had been produced by grafting, with various substances which produce a rise in the blood pressure and a contraction of the vessels in the body generally. The two substances with which the best results were obtained were "ernutin," a preparation made from ergot, and pituitary extract. The authors give in detail their results from the use of these two substances and think that, in view of their work, these two substances produced somewhat similar results to those used by Wassermann and by Neuberg and his collaborators. In the case of the pituitary extract, where the dose was larger and more injections were given, necrosis was induced as well as hæmorrhages, and the growth of the tumor was appar-

ently checked in a large proportion of cases. But there is no suggestion that there was any specific action upon the cancer cells. They think that the results obtained with the other substances used by Wassermann and Neuberg and his collaborators are also mechanical, although, as the substances they used were highly toxic, their results, in the case of the animals that survived the treatment, were more perfect. It seems possible that something might be done towards producing an effect upon cancer cells by injecting substances which will tend to kill the cells, in combination with something which will contract the blood-vessels, such as pituitary extract and ernutin.

DONALD C. BALFOUR.

Rous: False Transitions Between Normal and Cancerous Epithelium. *J. Exp. Med.*, 1913, xvii, 494.
By Surg., Gynec. & Obst.

The question as to whether there is a true transition between normal and cancer cells has been much debated on account of its bearing on the theory that cancer originates directly from the normal cells among which it arises, certain investigators holding that this does occur. Rous presents a number of photo-micrographs of sections showing apparent union and transition. The sections were taken from rats in which cancer tissue had been implanted on exposed surfaces made by removing a disc of skin, and show how deceptive these transition pictures may be.

Rous does not affirm or deny the existence of transition, but presents the article and photographs merely for the purpose of drawing attention to the greater caution necessary in interpreting the histological appearances of transition between normal and carcinomatous epithelium.

JAMES F. CHURCHILL.

Tytler: A Transplantable New Growth of the Fowl Producing Cartilage and Bone. *J. Exp. Med.*, 1913, xvii, 466.
By Surg., Gynec. & Obst.

Tytler has successfully transplanted an osteochondrosarcoma of the common fowl, designated as Chicken Tumor VII. He has transplanted it to seven successive series of hosts. The original growth contained bone and cartilage and was attached to the sternal keel of an otherwise healthy chicken. In the growths derived from its transplantation cartilage is regularly laid down, followed by bone if the host lives long enough. The prechondral tissue consists of spindle-shaped or multipolar cells of the fibroblastic type. The histological character and behavior of this prechondral tissue shows it to be sarcomatous, and this is further proven by the occurrence of metastases in one case.

The tumor could not be transferred to pigeons, but grew readily in two alien breeds of chickens. Re-inoculation experiments suggest the occurrence of a natural individual immunity, and of a certain degree of acquired resistance. The tumor has been transferred by means of the filtrate from a Berkefeld filter.

JAMES F. CHURCHILL.

Davis: The Transplantation of Rib Cartilage into Pedunculated Skin Flaps; An Experimental Study. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 116.
By Surg., Gynec. & Obst.

In the correction of mutilations or defects, such as those which involve the ears or nose, it is often requisite to use flaps of tissue with skin on both sides. These flaps can be secured in many ways, but Davis believes the factor of chief importance is to provide a framework to support the flap which will secure the desired contour, and at the same time prevent shrinkage. The ideal substance for this purpose is readily seen to be a material which will not act as a foreign body, one which is easily obtainable, is rigid enough for the purpose and at the same time can be shaped as desired. In seeking for some suitable tissue in the body which would fulfill these requirements, the author was led to undertake the experiments with costal cartilage which are outlined in this article.

Twenty-four experiments were carried out on fifteen dogs. The cartilage was obtained from the cartilaginous ribs. The perichondrium was not disturbed except when shaping was done. The cartilage was either imbedded in a thin layer of subcutaneous fat, or was placed in a pocket burrowed in the subcutaneous tissue itself, or was surrounded by the skin after the subcutaneous tissue had been removed. He varied the location and shape of the cartilage in the different flaps. In some it was placed parallel to the base of the flap and in others vertically, and in different parts of the flap. In still others it was placed diagonally across the flap. The pieces of cartilage used varied in length from $1\frac{1}{2}$ to 7 cm. They were allowed to remain in the flaps from 7 to 120 days. Macroscopic examination at the end of this period showed in every instance that the squarely cut ends of the transplanted cartilage had become slightly rounded. The healing was reactionless and the cartilage did not act as a foreign body. The measurements of the cartilage when removed from the flap differed very little, if at all, from those taken at the time of transplantation.

Microscopic examination showed the transplanted cartilage surrounded by a loose connective tissue zone containing blood-vessels, which were more or less abundant according to the length of time after transplantation. The cartilage cells appeared normal and there were no signs of degeneration or absorption.

From the results which Davis has obtained in these experiments and from clinical experience, he feels sure that the transplantation of rib cartilage into skin flaps is a safe and promising procedure. He suggests that cartilage can be used with advantage in otoplasty, in the restorative operations made necessary by traumatism and disease. In microtia also much can be done, by the transference of a flap thus supported, in improving the condition due to arrested development. In rhinoplasty the cartilage support can be placed in a double-faced skin flap from a distant part when it is formed, or can be

inserted after the flap is in its new position. It is especially advantageous in the correction of saddle nose.

As to the fate of the transplanted cartilage in these experiments as far as can be seen the cartilage lives, is properly nourished and does not act as a foreign body. There has been no increase in length in any of the pieces transplanted. There is practically no absorption and there are no signs of degeneration, either macroscopically or microscopically. The cartilage shrinks very little, if any, up to four months, which is the longest period in the series, and it seems reasonable to believe that it will continue to be nourished and will live and act as a support as long as needed. **GEORGE E. BEILBY.**

SERA, VACCINES, AND FERMENTS

Kocher: Further Observations on the Treatment of Tetanus with Magnesium Sulphate (Weitere Beobachtungen über die Heilung des Tetanus mit Magnesiumsulfat). *Cor.-Bl. f. schweiz. Ärzte*, 1913, xliii, 97.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This paper is a detailed communication regarding three further severe cases of tetanus, which were treated by intradural injection of magnesium sulphate. Two of the cases recovered.

The third was the case of a five and a half year old child, with "Ablederung of the Vola manus" — an injury which showed an extraordinarily favorable nutritive substratum for the tetanus bacillus after an eight-day incubation. As a result there was here a rapid development of tetanus in its most virulent form, in which the muscles of the head, back and thorax were especially attacked with cramps. As an associated cause of death, the autopsy showed a thrombosis of the sinus longitudinalis, of the left sinus transversus, of the superficial cerebral veins, and of the branches of the pulmonary vein of the right lower lobe. A tracheitis necrotica which had reached the main bronchial tubes is to be regarded as the result of a local injury through a tracheotomy, due to the author's use of oxygen insufflation following a threatening cessation of respiration.

A 2-10 cc. of a 15 per cent magnesium sulphate solution was used for injection, according to the age of the patient and the violence of the spasms. Occasionally several injections a day were required. The injection is indicated with the appearance of muscular spasms, and with continued rigidity only where respiration is markedly inhibited by the rigor of the throat, abdomen and thorax muscles. In the cases observed, a cessation of the cramps, relaxation and sleep appeared after a short time, — occasionally after only a few minutes. The effect of this intradural injection of magnesium sulphate depends upon local processes. The position of the patient wields a great influence over the manner in which this spreads, so that if the patient is placed horizontally, or if the head is placed a little lower, a deep sleep appears after a very brief time. This effect is also

seen if the head is not lowered until some time after the injection. By an examination of the spinal cord of the child which had died of tetanus, Bürgi was able to demonstrate the presence of the magnesium salt in the nervous tissue, and he found that the content decreased from above downward. This tallies exactly with the clinical observations on the influence of position on the extension of the action. The significance of this lies in the fact that the physician may thus regulate the distribution of the drug. Kocher recommends that one strive to secure a cerebral effect from the first where the muscles of the head and chest are involved. Where the respiratory center tends to become dangerously involved, there are certain remedies, such as the washing of the subarachnoid space with salt solution, and insufflation of oxygen or air. The author performed tracheotomy in all three cases and insufflated oxygen. According to a communication from Meltzer, however, a sustained insufflation under 15-20 mm. mercury pressure is preferable, because in that case the carbonic acid is more quickly expelled. A prophylactic physostigmin injection, or even a prophylactic tracheotomy may be considered, in order that, in case of necessity, oxygen or air may be immediately administered.

WORTMANN.

McCord: The Employment of Protective Enzymes of the Blood as a Means of Extracorporeal Diagnosis. *Surg., Gynec. & Obst.*, 1913, xvi, 418.

By Surg., Gynec. & Obst.

On the parenteral introduction into the blood of substances different in structural form from such as normally occur, there arise enzymes capable of disintegrating these foreign materials, and transforming them into forms not qualitatively different from normal blood constituents. The portals of entry for such materials are: (1) overloading the intestinal tract, so that some food passes through the enteric barrier in a complex form; (2) from intravenous and intra-abdominal injections; (3) or from the organs of the body, which from their individual specific nature when thrown into the circulation as unchanged albumens, are no less foreign than parenteral injections. This formation of protective enzymes is involved in the phenomena of sensitization, anaphylaxis, and immunity. Such an enzyme cleavage of proteins underlies the various cutaneous reactions such as lepro-diagnosis, tuberculin reactions, and the cutaneous diagnosis of syphilis. It is pointed out that cleavage of proteins not only occurs intracorporeally, but that drawn blood has similar proteolytic activity when placed in contact with substances against which the contained enzymes were generated. The sero-diagnosis of pregnancy as evolved by Abderhalden is based on this phenomenon. In the period of placental formation cellular fragments from chorionic villi are thrown into the material circulation with the concomitant formation of protective enzymes (choriolytins) which in turn digest the

placental proteins. Drawn blood containing these enzymes digest extracorporeally, placental proteins, breaking the complex forms down to the amino acid stage, which through dialysis serves as a criterion of the test.

Employing the methods of Abderhalden with some modifications, laboratory work on humans, cows, dogs, and guinea pigs was carried out. Two hundred and forty experiments yielded results corroborating the results reported from Abderhalden's work. A more permanent and more easily handled preparation of placenta was obtained by desiccating the coagulated placenta, by extracting repeatedly with acetone and drying "in vacuo" in an atmosphere of toluol. This by comparison with coagulated placenta in the same cases gave accurate results. Despite the complex technique and many sources of error, the method when carefully controlled appears of sufficient merit to prove of value in the differential diagnosis between pregnancy and the many simulating conditions.

Von Ruck: The Relative Value of Living or Dead Tubercle Bacilli and of their Endotoxins in Solution in Active Immunization Against Tuberculosis. *Med. Rec.*, 1913, lxxxiii, 507.

By Surg., Gynec. & Obst.

Spontaneous recovery in tuberculosis is assumed to be due to the formation of specific protective bacteriolytic substances which can be demonstrated in the sera, but in many cases resorption of bacillary products is massive, overwhelming the organism and in others complicated by absorption of products of other pathogenic bacteria, and the course of a given case depends therefore largely on these two factors.

If, during the excessive resorption of bacillary products, such serum is tested for amboceptor, it is only that which is not bound to the free endotoxins or bacilli which is demonstrable. The united antibodies and endotoxins are further reduced through the ferment action of complement and these reduction products are presumably toxic peptones whose elimination through the kidneys account for the toxicity of the urine in tuberculosis. With the advent of sufficient drainage amelioration occurs coinciding with the disappearance of antigen in the blood, but often accompanied by excessive reabsorption of endotoxins corresponding with the increased tissue disintegration.

For these reasons active immunization is not always necessary and at an inopportune time may do harm, while progressive cases receive at best but little benefit. Relapses under any degree of immunity may be accounted for by the breaking down of caseous tissue with renewed absorption of bacillary products, while in surgical tuberculosis demonstrable antibodies occur late if at all and are especially liable to be benefited by active immunization.

In considering the antigen for the production of active immunity it is agreed that it must represent all body substances of the bacterium. Many anti-

gens have been offered and the contradictory results following their use led many observers to believe that a true immunity against tuberculosis was impossible of attainment. The demonstration of antibodies by the complement of fixation test has greatly aided in solving this question. A sterile soluble vaccine if equally efficient is preferable to one of dead or living bacteria either for therapeutic or prophylactic purposes, because of the inaccuracy of the dose of the bacillary emulsion and the liability to local necrosis at the point of injection. The power to liberate endotoxins from the bodies of tubercle bacilli is acquired very slowly in the normal lower animal and one has no right to infer it to be any greater in the non-tuberculous human when it is desired to give the antigen for prophylactic purposes. Furthermore, living tubercle bacilli of the human type have been found in the milk and flesh of vaccinated cattle three years after their intravenous administration and the danger of resumption of virulence is great, the experiments of many observers being quoted to show that avirulency by passage through animals is not permanent.

In discussing prophylactic immunization against tuberculosis by means of a non-living antigen in the form of pure endotoxins of tubercle bacilli, Von Ruck attributes its value to the presence of all necessary constituents of the organism. The results of the administration of this vaccine in two series of cases are offered, the first determined as long as fourteen months and the second only three months after vaccination. Of 112 cases examined fourteen months later, all have made a complete physical and clinical recovery after a single dose of vaccine with one exception in which other than tuberculous disease accounts for the ill-health. Of 166 cases showing glandular enlargement involving one to six groups there are now only seven which show enlargement, confined to one or two groups. Subcutaneous tuberculin tests, positive in all cases before treatment, now are uniformly negative.

The improvement in 110 cases of the second series examined three months after vaccination is marked. Two are still under treatment, ten are clinically well and the balance have physical signs limited to small areas. No glandular enlargement is demonstrable in forty cases which previously showed involvement of one to six groups.

Von Ruck believes he has supplied sufficient evidence of the prophylactic value of his vaccine and summarizes it as follows:

1. After one full dose of vaccine all the specific antibodies can be demonstrated in every serum after the fifth day and without diminution up to twenty months.

2. These sera cause complete disintegration *in vitro* of the bodies of virulent tubercle bacilli to granules and free fat; and *in vivo* cause such complete destruction that no bacillary residue is demonstrable.

3. The sera destroy all virulence of the bacillary residue left over in the tubes used for bacteriolytic tests *in vitro* and immunized animals withstand the

tests *in vivo*, as do normal animals when the immune serum is injected at the time the infection is made.

4. Animals can be immunized to a like degree, their sera showing the same bacteriolytic action *in vivo* and *in vitro*, and these animals resist an infection many times more virulent than is necessary to kill controls.

5. In over 150 cases of early pulmonary tuberculosis a single full dose of vaccine was invariably followed by a clinical cure. E. K. ARMSTRONG.

BLOOD

Epstein: Further Studies on the Chemistry of Blood Serum. *J. Exp. Med.*, 1913. xvii, 444.

By Surg., Gynec. & Obst.

Epstein has made chemical analyses of the blood serum in various disease conditions, and has found that the proteins are subject to extensive variations, and in some conditions the globulin content is markedly increased. In the present paper he reports the observations on three classes of cases. All are localized renal affections. He found that in the minor surgical cases (considered normal) the chemical composition of the serum agrees, as far as its proteins are concerned, with the usual values. There was no variation found on repeated examination. The incoagulable nitrogen varies considerably in the total amount in the different cases, as well as in its percentage relations to the other constituents of the serum.

The cases of prostatic hypertrophy, with or without interstitial nephritis, show no change from the normal in the character of the protein content nor the ratio which the individual fractions bear to one another. On the other hand, the non-coagulable and non-protein nitrogen show marked fluctuations, some of which correspond to the degree of functional deficiency of the kidneys. In cases of localized infections of the kidneys, the changes in the serum are twofold. There is an increase in the globulins due to the infection, as is seen in the infections localized elsewhere. The non-protein nitrogen increases apparently in direct proportion to the functional impairment of the kidney.

JAMES F. CHURCHILL.

Abderhalden: The Detection of Foreign Substances in the Blood by Dialysis and Optical Methods and the Use of Such Methods and the Principles Underlying Them in Pathology (Der Nachweis blutfremder Stoffe mittels des Dialysierverfahrens und der optischen Methode und Verwendung dieser Methoden mit den ihnen zugrunde liegenden Anschauungen auf dem Gebiete der Pathologie). *Beitr. z. klin. d. Infektionskrankh., u. z. Immunitätsforsch.*, 1913, i, 243.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A summary is presented of the views of Abderhalden on the reduction of foreign substances in the blood stream by protective ferments and the detection of the latter. Substances partaken of as food are so changed by the function of the gastro-intesti-

nal tract and liver cells that they become readily absorbed. The detection of the protective ferment permits of the conclusion of the presence of these foreign substances. This proof may be rendered by the dialysis and the optical method. The peptone which is the end product of the action of the serum containing the protective ferment on the foreign substance in the blood permeates the dialysing capsule and thus may be detected in the outer fluid by the biuret test or by ninhydrin. For the optical test a peptone is produced from the tissue to be examined which shows a definite reflection in the polariscope. The action of the ferment containing serum on this peptone changes the deflection. The former method is the simpler one, the second enables a quantitative determination. Minute description of the methods and the different sources of error is given. A practical test in diagnosis of pregnancy is possible by the detection of the protective ferment in the pregnancy serum which acts on the placental tissue. Further possibilities for the use of this method in the different problems of pathology may be expected. BONDY.

Schlossmann: What is the Practical Surgical Value of Determining the Coagulability of the Blood (Welchen praktischen Wert haben Blutgerinnungsbestimmungen für die Chirurgie)? *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

If the determination of coagulability is to have any practical value, a simple and, at the same time, accurate apparatus must be available. The author thinks Bürker's is the best for the practitioner. The procedure is of diagnostic value in revealing cases of masked and partial hæmophilia, where clinical symptoms are lacking, though the coagulability of the blood is decreased. It has no value as a means of differential diagnosis between doubtful cases of hypo- and hyperthyroidism (Kocher). Slight changes of coagulability, such as Kottmann asserted were present, were found only in very marked cases of Basedow's disease or myxœdema. Determination of coagulability is a very valuable aid in prognosis where operations are performed in cases of cholæmia. They give a clue to prognosis, not only as to the general resistance of the cholæmic patient, but also as to the amount of post-operative hæmorrhage to be expected. The knowledge of the blood's capacity for coagulation has so far had no satisfactory therapeutic results. All means used to increase it are notoriously uncertain in their effect. Some progress has been made in controlling hæmorrhage by the local application of tissue juices which favor clotting. Tissue fluids expressed from the human thyroid and from animal organs, prepared by the author's method, which renders them stable and sterile, have been used with good results in hæmorrhage from operations on parenchymatous tissue, especially in cases where the coagulability of the blood was defective.

UNGER, in discussion, calls attention to the fact

that in experimental work to test the influence of various substances on the coagulability of the blood, it must be removed from the vein in such a way that it touches nothing but the endothelium. Even the slightest admixture of tissue juices must be carefully avoided. The coagulability of the blood is markedly increased by the addition of concentrated salt solutions.

KATZENSTEIN.

Drugg: Coagulation of the Blood and Its Value in Obstetrics and Gynecology (Die Koagulation des Blutes und ihre Verwertung in Geburtshilfe und Gynäkologie). *Schmidt's Jahrb.*, Leipz., 1913, March. By Surg., Gynec. & Obst.

This is an exhaustive résumé of all the recent literature on the subject. After fully reviewing and discussing the various papers, the following conclusions are drawn:

First, in diseased conditions the coagulation is much more frequently lengthened than shortened.

Second, it is doubtful whether there is an increased coagulation of the blood which is of pathological importance to man.

Third, therefore all attempts to prevent thrombosis in the circulating blood by lowering the fibrin coagulation ability are purposeless.

CLIFFORD G. GRULEE.

BLOOD AND LYMPH VESSELS

Pfender: The Value of Skiagraphy in the Diagnosis of Aneurism of the Abdominal Aorta; Presentation of Case and Descriptive X-Ray Plates. *Wash. M. Ann.*, 1913, xii, 91.

By Surg., Gynec. & Obst.

Pfender says that although vascular skiagraphy is very difficult as compared to that of bones, at the present day with improved and perfected Röntgen apparatus it is possible not only "to confirm a diagnosis of aneurism but to establish a positive diagnosis in fairly early stages of such conditions in even extremely doubtful cases." Very little skiagraphic work has been reported about abdominal aneurism, probably because this form of aneurism is less frequently encountered than the thoracic variety and also because it is practically impossible to use the fluoroscope because of the density of the abdominal tissues.

Any part of the abdominal aorta may be the seat of an aneurism but it most commonly occurs in the region of the celiac axis and is of the saccular type, later becoming fusiform. The condition is usually not diagnosed till it has progressed so far that a tumor can be seen and expansile pulsation elicited, and in many cases diagnosis is never made. The author therefore suggests that in an obscure symptom-complex arising within the abdominal cavity an X-ray be taken. If aneurism be present, the plate will probably show erosion at some point along the spinal column and this erosion is easily differentiated from tuberculous osteitis.

The prognosis of aneurism of the abdominal aorta

is most unfavorable at present, the average course being 12 to 20 months. In 65 per cent of the cases it terminates in rupture. Surgical procedures are of little value.

Case report. Man, mulatto, age 36. History negative. Wasserman negative. Hard worker. Patient hurt his back in 1911 while doing heavy lifting. A dull pain developed and became so severe that patient was incapacitated. Pain radiated from back to both hips and caused weakness in lower extremities. Relief was obtained by lying face down on a hard table. Lost 63 pounds in 2 years and was treated for tuberculosis without benefit. On examination by Pfender, patient presented a tumor about 6 cm. to left of last dorsal vertebra or first lumbar. Expansile pulsation. Radiograph showed partial erosion of first lumbar vertebra and lateral deviation of the spinal axis to the right. Also showed a distinct shadow from the upper border of the 12th dorsal to the 2d lumbar vertebra and about 7 cm. to left of the lumbar spine. Pain was terrific and constant, and the course was steadily downward in spite of all treatment.

BERTRAM M. BERNHEIM.

Key: Operation for Embolus of the Femoral Artery (Fall af operad emboli i arteria femoralis).

Hygiea, Stockholm, 1913, lxxv, 75.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A forty-three-year-old man with a mitral stenosis of several years' standing had been feeling thoroughly well, but was suddenly attacked by pain in the abdomen, bloody diarrhoea and vomiting. A diagnosis of probable embolus or thrombosis of the mesenteric vessels was made; under general treatment the patient improved, but twenty days later he suddenly began to have severe pain in the left popliteal space, also coldness and lack of sensation in the leg.

On a diagnosis of embolus of the femoral or popliteal artery, the patient was operated seven hours after the beginning of symptoms. Incisions made over the back of the foot and in the popliteal space demonstrated that the arteries were empty. An incision was then made in the inguinal region, exposing the common superficial and deep femoral arteries. For 2.5 cm. upwards from the bifurcation of the common femoral artery, resistance was felt, which, on incision, proved to be an embolus, completely filling the artery. The common and deep femoral arteries were clamped, but none were placed on the superficial femoral. After removing the embolus, a troublesome hæmorrhage occurred from the collaterals through the external pudic artery. The incisions at first did not bleed, but now that the circulation was unimpeded they bled freely. The extremity was elevated after the operation. During the after-treatment there was temporary paralysis of the peroneus muscles and thrombosis of the external peroneal veins, with stricture of the gastrocnemius muscle, probably caused by a slight ischæmic contracture.

Three cases of operation for embolus of the

peripheral arteries were found in the literature; one successful and two failures. While it is a generally accepted opinion that the circulation in an extremity can be cut off by an ischæmic bandage for two or three hours without injury, from this case it appears that a complete occlusion can last for seven hours without necessitating amputation.

GIERTZ.

Oppel: Wieting's Operation and the Impeded Circulation (Die Wietingsche Operation und der reduzierte Blutkreislauf). *Ärzt-Zeit.*, 1913, xx, 303. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author states that Wieting's operation is successful only in cases of slowly progressing ischæmic gangrene not complicated by either thrombophlebitis or phlegmon. Bier's experiments show that under increased pressure in the veins the resistance of the valves can be overcome and that the blood stream can be reversed, but further experiments by the same author show that even under rather high pressure only part of the blood can be forced through the capillaries into the arteries. Bier explains this by the so-called "blood-sense" (Blutgefühl), that is, the selective power of the capillaries to allow only arterial blood to pass through. It is therefore possible, after Wieting's operation, for the blood to overcome the pressure and empty itself into the arteries, though it must not be forgotten that Bier's experiments were performed on a limb under constriction. If the extremity is not constricted, the blood will partially overcome the resistance of the valves, but will return by way of the collateral veins without reaching the capillaries, as the experiments of Coenen and Wiewiorowsky go to show. In spite of this, Wieting, and more recently Perimoff, insist that the operation is followed by objective and subjective improvement, though neither author can explain his point satisfactorily.

The author agrees with Hesse that the improvement is to be explained by the delayed return circulation that is caused by the slowing of the blood currents. The author suggests the ligation of the popliteal vein, and considers this a palliative procedure claiming to have observed temporary improvement in all his cases except one. The disadvantage of the operation in the author's opinion is the decreased supply of arterial blood in the collateral vessels, whereas success can be attained only by raising the pressure in these vessels, a condition which can be produced in cases of gangrene of the foot by interfering with the venous return by ligation of the popliteal vein. The author considers the ligation of this vein a palliative measure which is contra-indicated when there is thrombophlebitis or œdema of the extremity involved. If gangrene has set in and amputation is refused, this measure will relieve the pain temporarily, even though the development of the process cannot be checked. If the gangrene has not developed, the function of the extremity may be temporarily restored.

VON HOLST.

Werner and Von Zubrzycki: The Influence of Colloidal Silver on the Opsonic Index (Über die Beeinflussung der Opsonie durch Elektrargol). *München. med. Wchnschr.*, 1913, lx, 583.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Colloidal metal influences the opsonic index of a serum toward various bacteria. This action does not depend upon the colloid nature of the substance but upon the metals. The behavior of the leucocytes toward streptococci under the influence of colloidal silver was studied in man, animal, and the test-tube. For the animal tests, rabbits were used. The vein of the ear was injected with an isotonic colloidal silver solution, 0.15 gm. per kgm. body weight. The serum was collected before the injection as well as one hour and twenty-four hours afterwards. A twenty-four hour bouillon culture of streptococci was diluted 1:3. The leucocytes of the patient were washed three times in normal salt solution after the blood had been collected in a 1½ per cent sodium citrate solution. The experiments showed that after twenty-four hours the phagocytosis is markedly raised, but in the one-hour specimens this is not noticeable. For experiments on the human, two pregnant patients, two with puerperal fever and two puerperal cases without fever were injected with the silver solution in the vena media cubiti. The results were the same as those in animals and there were no variations in the way the different patients reacted. In the afebrile cases nervous manifestations, increased blood pressure, cyanosis and frequent pulse appeared, all of which subsided in 5-10 minutes. Lastly, experiments were carried on to study the nature of the action brought about by the solution to see whether it affected the phagocytic potency or whether the serum was mainly affected. These resulted in the conclusion that the results were due to the change in the serum. The opsonic index of the leucocytes is raised only in the presence of and by means of serum.

HEIMANN.

ELECTROLOGY

Grödel: Four Years of Experiments with Röntgen Ray Apparatus with an Interrupter (rectifier) and Certain Important Modifications of the Apparatus (Vierjährige Erfahrungen mit unterbrecherlosen [Gleichrichter] Röntgenapparaten und einige wichtige Neuerungen an denselben). *München. med. Wchnschr.*, 1913, lx, 471.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

One disadvantage of the Röntgen apparatus with an interrupter is that the interrupter very soon wears out and is difficult of manipulation. This fact led the author to devote several years to the elaboration of a practical Röntgen ray apparatus without an interrupter. In the instrument devised, an alternating current is used, which for high tension work is transformed into a pulsating direct current (without closing the current) by means of secondary rectification. The secondary energy can be very exactly measured. To make the apparatus economical for X-ray treatment, the phases of the current

which are not required to produce a steady non-flickering light are conducted into a specially constructed resistor. The apparatus, without interrupter, has also been made suitable for very short flash-exposures by increasing its capacity, this corresponding to the increased effect obtained in the apparatus with interrupters by varying the method of interrupting the current. This increased capacity is obtained by conducting the rapidly interrupted primary current of the rectifier into a small specially constructed transformer without iron enclosure (rapid "demagnetizing"), where it produces a very short secondary current which is then conducted into the large transformer with an iron enclosure. Here it produces a secondary current which is also a rapid current but of very high tension. The rectifier provided with a single stroke interrupter is therefore just as valuable as the apparatus with interrupter; under certain circumstances it is even preferable because of the simplicity of its operation.

MONHEIM.

Caan: Treatment of Malignant Tumors with Radio-active Substances (Zur Behandlung maligner Tumoren mit radioaktiven Substanzen). *München. med. Wchnschr.*, 1913, lx, 9.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Caan reports the results of mesothorium and thorium-X treatment and the methods used.

The mesothorium is used externally, preferably as the mesothorium bromide, by means of varnished plates, capsules, glass or metal rods, by the method of diminishing filtration. As filters 0.5 mm. rubber plates, 0.1, 0.2, 0.5, 1 and 2 mm. aluminum plates, 0.1 mm. silver plates, 0.1, 0.2, 0.5, 1 and 2 mm. lead plates, cotton, and paper are used. The secondary rays emanating from the aluminum plates, which cause a pigmentation of the skin, are most easily absorbed by a layer of 20 sheets of filter paper or 1 cm. of cotton between the filter and organ. The lead filter permits the entire utilization of the ultra-penetrating rays (hard beta and gamma rays), because the soft X and beta rays are entirely absorbed.

To ray the oesophagus carcinoma, a special instrument was constructed by Caan and Czerny. In addition to the injurious action of the mesothorium on the tumor cells, there was noted a stimulation to connective tissue proliferation. In five cases of oesophagus stenosis by carcinoma, the opening in the digestive tube was increased to such an extent by bougieing with the mesothorium sound that even solid substances could be swallowed. This was followed by an increase in weight. In 78 cases of recurring carcinoma of the breast, not only the superficial nodules in the skin disappeared, but also carcinoma nodules under the skin up to the size of a walnut. Malignant tumors of the mouth and mucous membrane of the throat were not suitable for mesothorium treatment. Thorium-X (a changed product of mesothorium) is used in physiological salt solution and is injected into the tumor or intravenously or by both methods. In injections

into the tumor thorium-X is used in full strength at intervals of six to eight days, preferably in divided doses. Intravenous thorium injections were usually endured well in proper doses, and showed a good effect in a number of tumors which could not otherwise be influenced. In intravenous injections the thorium-X should be used only in dilute solutions, preferably 1.0 cc. (activity usually equals 1,000,000) in 10 cc. physiologic salt solution. On the day of injection the patient should remain as quiet as possible, and during the next 3 or 4 days should take mild laxatives and enemas so that the large intestine may be emptied as much as possible. In carcinoma of the intestinal tract, a paste of pulverized silicic acid, thorium-X solution and sugar is given, according to Werner, preferably in the form of pills as advised by Hessel. By the use of pastes and plugs made with thorium-X and silicic acid powder, the author observed a change a number of times from carcinoma ulcers into healthy granulating wounds. The histological changes following thorium-X injections show no noteworthy changes from those found by the use of mesothorium. In 206 patients suffering with tumors which were treated with thorium-X, 40 per cent showed improvement of the tumors, which in 20 per cent of the cases exceeded the usual effect of radium. Because of the short time the patients had been under observation, the author can speak of transitory effects only; and he lays stress on the fact that mesothorium and thorium-X treatment do not replace the operative therapy, but are only supplementary to it, while in inoperable cases the radioactive therapy is the only method which can be used.

LEUENBERGER.

Freudenthal: Radium as an Aid in the Treatment of Malignant Neoplasms. *Internat. J. Surg.*, 1913, xxvi, 80.

By Surg., Gynec. & Obst.

The author briefly discusses the use of radio-active substances, the Forest cold cautery and Hertzian waves, and after reporting in short the history of radium concludes, after years of experience that it is a wonderful remedy in certain diseases if correctly applied.

Epithelioma of the skin is one of them, and the author calls attention to the fact that X-rays, even though successful in the treatment, are not without danger, and that radium, in his hands, is much to be preferred. He reports a case of rodent ulcer (epithelioma) of the wing of the nose and lip which had gone from one physician to another, finally falling into the hands of a barber who cauterized it, causing a perforation which necessitated a plastic operation to close the defect. The malignant growth, however, returned, and 10 mg. of radium of 1,000,000 radio activity was applied for twenty-four hours; it was later reapplied for two hours, on and off, the ulcer rapidly healed and has remained so for fourteen months.

Twelve other cases are reported, among them one of sarcoma of the tonsil. This was cured by radium applications and remained so for six years when a

recurrence involving the tissues beneath the skin presented; preliminary operation was advised but refused, and the patient passed from under the author's observation.

In contrast to these cases the author reports many failures due, he thinks, to the fact that so many of them were very late cases—some even in extremis. When the lymphatic glands are involved a cure by radium is impossible. Secondly, the early removal of diseased tissues and the immediate application of radium will lead to a far greater number of cures than by any other procedure.

This immediate application the author believes to be the most important factor. H. A. PORTS.

Aschoff, Krönig and Gauss: The Influence on Deep-seated Carcinoma of X- and Radium Rays (Zur Frage der Beeinflussbarkeit tiefliegender Krebse durch strahlende Energie). *München. med. Wchnschr.*, 1913, ix, 337.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors undertook to study the influence of strong filtered Röntgen and radium rays on deep-seated carcinoma. A number of cases in Krönig's clinic which were treated by the rays were observed for a long time clinically, and also the effects of the treatment were controlled by a pathologist (Aschoff) up to the end, by histologic examinations in which not only the composition of the tumor tissue but also the effect of the rays (especially very high doses) were noted for possible injuries of the rest of the organism. The cases examined were an inoperable carcinoma of the stomach, the cervix and the mamma from which extensive microscopic and numerous sections were made and the results of autopsies given. In addition five other cases of inoperable carcinoma of the portio and mamma which are still being treated are being controlled histologically. The following are the results: In the areas X-rayed there was not found in a single case complete destruction of the carcinoma tissue, but pronounced retrogression of the tumor was attained, most markedly in a carcinoma of the stomach. At first this was of a purely adenomatous character but in post-mortem only single nests of carcinoma cells in a scarred ground substance were found. In the other cases following a regression, there was again a growth, but the carcinoma tissue changed its type to a more ripened form of less

malignancy, that is, soft pavement epithileum carcinoma of the portio into a horny type, a tubular mamma carcinoma into a pavement celled. An influence is seen on the metastases which were not directly X-rayed. A growth in the sense of a distant growth was not noted, from which it is concluded that therapeutically it is not particularly necessary to X-ray the metastases locally. As to the injurious effects upon the rest of the body, the liver showed a definite injury in two cases and the mucosa of the stomach showed changes which probably were due to the treatment while the other organs seem to be able to stand very high doses without injury. The blood picture remained normal with a single exception (transient leukopenia). The examinations showed the possibility of using X-rays for deep cancer without injuring the overlying skin, and that these influenced the tumor markedly.

HARTERT.

Steuart: Notes from the X-ray Department of St. Bartholomew's Hospital. *Arch. Rönt. Ray*, 1913, xvii, 412.

By Surg., Gynec. & Obst.

In experimenting with metals as to their power of giving off secondary rays it was found that metallic silver possessed this quality to such a degree that it could be used to advantage in an intensifying screen. Smooth sheets of silver or sheets of copper plated with silver when placed in contact with the film of photographic plates reduced the time of exposure to a third or a fourth of that required for the plate alone.

Since this effect depends upon a secondary radiation from the silver rather than an actinic effect from such a fluorescing material as calcium tungstate, the resultant detail in all the shadows of the plate is much better. The secondary rays produce a rich chemical action upon the plate and are able to pass through such minor obstructions as particles of dust. The plates obtained are therefore free from the granular artefacts and dust spots so generally seen in plates made with the screens now in use.

The degree of intensification is less than is given by calcium tungstate which reduces the time of exposure much more than the three or four times claimed for silver. The silver screens are therefore of greatest use in the radiography of subjects where the utmost speed is not essential but great clearness and detail are required.

HOLLIS E. POTTER.

GYNECOLOGY

UTERUS

Cary: Chorio-epithelioma; Recurrence Three Years After; Invasion of the Spinal Canal; Villi in the Secondary Growths. *Surg., Gynec. & Obst.*, 1913, xvi, 362. By Surg., Gynec. & Obst.

The author presents a case of chorio-epithelioma in which secondary manifestations of the disease occurred and terminated fatally three years after a complete panhysterectomy was performed.

The case was admitted to the hospital four months after an incomplete abortion during which time she had been cured. On entrance she complained of pain and a tumor mass in the left lower quadrant of the abdomen. At operation the uterus was found to be enlarged and thickened; a tumor was present in the left broad ligament and in the left ovarian veins. These tumors were very vascular and bled easily. A radical operation was done and the patient was discharged from the hospital in good condition.

The patient was re-admitted to the hospital just three years after her previous operation, this time complaining of pain in the back and hips. Her condition grew steadily worse, and she developed paralysis of the legs and involuntary urination and defecation, the severe pains disappearing. A fullness in the chest soon appeared with moderate, dyspnoea and she coughed up some bright red blood at intervals. During this time the respirations increased and the patient soon after died of exhaustion.

Autopsy showed metastatic nodules of secondary chorio-epithelioma in the lungs, spleen, diaphragm, dura mater, spiral cord, pulmonary arteries, ovarian and iliac vessels, and the thoracic duct. The author made a careful microscopic study of these various lesions and found villi in sections taken from tumors in the broad ligament, the left ovarian vein and in one instance from a section from the pillars of the diaphragm. None, however, were found in the lungs, where Langhans' cells seemed to predominate.

The author takes up the consideration of chorio-epithelioma as it is understood to-day and quotes: "The true chorio-epithelioma is a well defined structure resembling the epithelial covering of a villus in the early stages of gestation and placentation, namely Langhans' cells permeated and surrounded with syncytium, and plasmodiac masses resembling the syncytial ends of villi." A classification of the different kinds of chorioma, after Marchand and Ewing, is considered in which the various terms used are correlated so that the tumors may be brought under the heads of typical, atypical, or transitional chorio-epitheliomata.

It was thought best to classify this specimen as a chorio-adenoma, although exception may be taken

to this view on the ground that the integrity of the uterine cavity, the extensive secondary growth and the fatal outcome of the case are atypical.

Next the author discusses the unusual conditions in his case as contrasted to conditions found by other authors; namely, the presence of villi in the secondary tumors; recurrence 3 years after radical operation, and metastases in the spinal canal.

In conclusion he states: "One would be justified in calling this case a chorio-adenoma with malignant tendencies. It represents what Ewing terms 'potential malignancy,' for both the clinical and histological picture is that of a rather benign chorioma. This benignity lasted for nearly three years when malignancy appeared, as shown by the fatal termination from general metastases, which, in contrast to the earlier tumors, gave a sinister picture, containing many Langhans' cells, with mitotic figures, necrosis, thrombosis, and a leukocytic reaction. These latter Myers considers the essentials of malignancy."

Abel: Electrical Coagulation in the Surgical Treatment of Cancer, Especially of Uterine Cancer (*Die Elektrokoagulation bei der chirurgischen Behandlung des Krebses, speziell des Gebärmutterkrebses*). *Berl. klin. Wchnschr.*, 1913, I, 394.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

We must endeavor to perfect the surgical methods to such a degree that recurrences if possible will not occur after cancer operations. If we succeed in completely destroying the cancer tissue before it is removed from the body, so that we are enabled to work in completely immune tissue, we may then hope at least to avoid those recurrences which result from a dissemination of cancer cells during an operation. Such a complete destruction of tissue may be attained by the use of electric coagulation, or diathermy, according to Nagelschmidt and Von Zeynek. A de Forrest needle is used in place of one of the electrodes and the cautery needle replaces the knife. Blood and lymph vessels become coagulated and closed, unless hæmorrhage takes place. The author operated vaginally in a clinically favorable case by this method, no reaction occurring. The tissues were destroyed, with the exception of a small place in the fundus, and gave the appearance of having been cooked. An improvement in the technique is only necessary to destroy all invaded tissue without leaving any remnants. Operating according to this method is not very easy, but the operation need not be much lengthened by the diathermy. In the reported cases it lasted 50 minutes. The author requests surgeons and gynecologists to test the method.

SCHMID.

McDonald: The Treatment of Fibroid Tumors; with Report of 700 Cases. *Am. Med.*, 1913, xix, 161. By Surg., Gynec. & Obst.

The author has presented a series of 700 cases which have been worked up microscopically. The cases have been studied from the point of view of age and its relation to cancerous changes and degenerations and the tables tell their own tale.

TABULAR ANALYSIS OF AGE, COMPLICATIONS AND DEGENERATIONS OF 700 FIBROID TUMORS

Table 1. Character of Tumors

	No.	%
Single.....	238	34
Multiple.....	462	66
Small, up to 4 cm.	257	36.7
Medium, 4 to 8 cm.	209	29.8
Large, above 8 cm.	234	33.5
Subserous.....	136	19.5
Interstitial.....	190	27.1
Submucous.....	75	10.7
Combined.....	299	42.7

Table 2. Degenerations and Malignant Changes

(A) Degenerations of Tumor

	No.	%
Hyaline.....	127	18
Calcareous.....	65	9
Cystic.....	20	3
Hæmorrhagic.....	14	2
Necrotic.....	57	8
Adenomyoma.....	23	3

(B) Associated Malignant Changes

	No.	%
Adenocarcinoma.....	20	2.9
Squamous carcinoma.....	6	0.8
Sarcoma.....	7	1
Chorioepithelioma malignum.....	2	0.3
Total malignant changes.....	35	5

Table 3. Complications of Tumors

	No.	%
Ovarian cysts.....	53	7.5
Cystic ovaries.....	141	20
Ovarian fibroma.....	8	
Ovarian carcinoma.....	5	
Salpingitis.....	194	27.5
Appendicitis or periappendicitis.....	148	21

Table 4. Age of Patient

Age	No.	%	Age	No.	%
20-30	19	2.7	50-60	95	13
30-40	233	33	60-70	21	3
40-50	332				

Table 5. Relation of Age to Degenerations

(A) Necrosis.			(E) Squamous Carcinoma.		
Age	%		Age	%	
20-30	5		20-30	0	
30-40	7.7		30-40	0.4	
40-50	7.5		40-50	0.3	
50-60	9.3		50-60	3	
60-70	29		60-70	4.6	

(B) Calcareous Degeneration.

Age.	%
20-30	0
30-40	2
40-50	16
50-60	14
60-70	10

(F) Sarcoma.

Age.	%
20-30	0
30-40	0
40-50	0.6
50-60	3
60-70	9.5

(C) Hyaline Degeneration.

Age.	%
20-30	11
30-40	11.5
40-50	16.8
50-60	16.6
60-70	10

(G) Chorioepithelioma.

Age.	%
20-30	0
30-40	0
40-50	0.6
50-60	0
60-70	0

(D) Adenocarcinoma.

Age.	%
20-30	0
30-40	0
40-50	3.6
50-60	6.3
60-70	9.5

(H) Total Malignant Tumors.

Age.	%
20-30	0
30-40	0
40-50	5
50-60	12.7
60-70	23.8

Autopsies.....	26
Heart lesions at autopsy.....	11.5

A consideration of this table shows that the older a patient the more danger from the fibroid tumor. The older the patient the greater probability there is of malignant changes and other dangerous degeneration, such as necrosis. This shows that the menopause does not relieve the patient from danger from fibroids save from the hæmorrhage. Other and more dangerous complications remain and increase in degree with each succeeding year.

The consideration, therefore, of this series of fibroid tumors warrants the following conclusions:

1. The menopause does not bring a cure to fibroids; on the contrary, increasing age increases the danger from these growths.

2. There is little danger of malignancy arising in fibroids before the fortieth year of the patient, after which time the danger increases with each year.

3. In view of the sarcomatous changes, carcinomatous associations and other degenerations of uterine fibromyomas, early removal is indicated when they are of sufficient size to produce symptoms and cause the patients to seek advice. Small uncomplicated fibroids in young women do not require early treatment.

4. Thorough pathologic examination should be made of all fibroids for evidence of malignancy. The tumor should be opened at the time of operation and examined for adenocarcinoma or sarcoma. Particular study should be devoted to those tumors which are necrotic, cystic, or both, as among these are found the largest proportion of malignant changes.

5. In view of the large percentage of inflammatory changes in the Fallopian tubes and appendix, these should be examined at the time of operation and removed, if diseased.

EUGENE CARY.

Smith and Shaw: Red Degeneration of Uterine Fibromyomata. *Proc. Roy. Soc. Med.*, 1913, vi, 131.
By Surg., Gynec. & Obst.

The author divides the uterine fibromyomata of a red color into two pathological classes: thrombotic and angiomatous. He briefly gives their microscopical appearance. The thrombosed tumor very soon commences to degenerate and makes an ideal medium for the growth of micro-organisms. The symptoms accompanying this variety of tender, rapidly enlarging tumors are abdominal pain, increased temperature and general ill health which occur either singly or in combination. The angiomatous tumor shows free blood on the cut surface with numbers of thin walled blood vessels and with no clinical symptoms except hæmorrhage and a feeling of weight in the pelvis. R. T. GILLMORE.

Von der Hoeven: Mammin in Uterine Hæmorrhages (Mammine tegen Baarmoeder Bloedingen). *Nederl. Tijdschr. v. Geneesk.*, 1913, i, 606.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In connection with the publication of Wijn the author reports his experiences with mammin, which are much less favorable. In five cases of menorrhagia occurring in women between 18 and 40 years he had only one good result; in four cases of hæmorrhage due to mucous polypi and in one case of preclimacteric hæmorrhage the results were negative. He had one permanent success in a girl with retroflexion of the uterus, profuse menstruation and dysmenorrhœa; in three cases of myomata he had no results; total, 13 cases with only two favorable results. He warns against the conservative treatment of myoma, as malignant degeneration cannot always be excluded and wrong diagnoses are very frequent, thus rendering conservatism exceedingly doubtful. He reports six cases in which general practitioners and gynecologists had diagnosed myomata. At operation cystic ovarian embryomata was found three times, ovarian cancer twice and intestinal carcinoma once. Three of these six patients, therefore, must be considered as martyrs to an exaggerated conservatism in treatment.

STRATZ.

Parsamoff: Clinical Observations on the Action of Hæmostin in Uterine Hæmorrhages (Klinische Beobachtung über die Wirkung von Hæmostin bei Uterusblutungen). *Vrach. Gaz.*, St. Petersburg, 1913, xx, 396.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The remedy was used in forty cases. In eleven cases of endometritis post-abortion the remedy proved ineffectual three times; in these, curettage produced remnants of the abortion. In 13 cases of endometritis hæmorrhagica one negative result was obtained. The hæmorrhages decreased in two cases of myomata, and ceased completely in nine cases of salpingo-oöphoritis, three cases of para- and perimetritis, one case of functional menorrhagia and one case of incipient abortion. Other hæmostatic

remedies were given without success in some of these. The dose recommended is 24 to 30 tablets, of 0.2 gm. each. BRAUDE.

Rieck: The Therapy of Marked Menorrhagia (Zur Therapie übermässig starker menstrueller Blutungen). *Deutsche med. Wchnschr.*, 1913, xxxix, 653.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After mentioning the various drugs used to control unusually severe menorrhagia as well as the various minor surgical procedures, the author describes an operation, which he calls "defundation," which decreases the menstrual flow to a marked degree. The ovarian function is not disturbed by this operation, making the method applicable also in younger women. The operation consists in decreasing the bleeding surface. The corpus uteri is amputated vaginally so that only two to two and one half cm. of uterine mucosa is left. The operation is not without danger to the patient. By a special technique peritoneal irritation is eliminated. The loss of future child-bearing is a disadvantage which often makes the method impracticable.

The operation is of value in those cases in which hysterectomy was formerly done and those in which all other methods have failed. BENTHIN.

Carstens: Dysmenorrhea. *Cleveland M. J.*, 1913, xii, 233.
By Surg., Gynec. & Obst.

The author describes the different forms of dysmenorrhea which depend on some uterine defect. These defects are obstruction at the os, inflammations of the endometrium or myometrium and infantalism or atrophy. These obstructions are mechanical. The treatment is based on the physiologic therapy, on the symptoms, and on the local conditions present. He recommends 6 grains of ergotine twice daily given for several months. Locally cirrhotic ovaries must be removed, pus tubes must receive proper surgical attention, and fibroids be extirpated. To overcome flexions and to develop the uterine muscles he employs dilatation of the cervical canal and the introduction of stem pessaries. Dilatation is performed under general anæsthesia and should be employed only when the diseased condition is limited to the uterus. Finally he gives a minute description of the technique of the insertion of the stem pessary. Its beneficent action induces the development of the uterine muscle, overcomes existing flexions, establishes normal and regular menstruations and cures sterility. If the stem pessary shows a tendency to drop out of its place it may be retained by the use of a Hodge pessary. The stem pessary can be worn for years with impunity. HENRY SCHMITZ.

Tweedy: Polypus Complicating Inversion of the Uterus and Illustrating the Difficulty of Diagnosis. *J. Obst. & Gynec., Brit. Emp.*, 1913, xxiii, 190.
By Surg., Gynec. & Obst.

Tweedy's case is in the proceedings of the Royal Academy of Medicine in Ireland, December, 1912.

The patient was far advanced in anæmia and shock. She was half-witted and her condition so serious that the vagina was kept plugged for eight days while ergot and stimulants were administered. A round tumor was found protruding to within an inch of the vulva, which bled easily. The cervix could not be felt. Under anæsthesia and bi-manually the protruding mass was made out to be an inverted uterus with a pedunculated myoma. This tumor was removed and in so doing a cyst was opened containing fluid under great tension. There was severe bleeding for a time from the wound. The uterus was readily replaced by application of three bullet forceps.

CAREY CULBERTSON.

Frank: Contra-indications to Curetting. *N. Y. M. J.*, 1913, xcvi, 808. By Surg., Gynec. & Obst.

The author bases his observations on 2000 consecutive cases taken from his dispensary records, in which careful note was made of the number of curettings and the reasons for their performance. Of these cases more than one patient out of every five had been curetted at some time! He divides his observations under the following headings: (1) abortion — induced and spontaneous; (2) post-abortive conditions; (3) post-partum conditions; (4) ectopic gestation; (5) parametritis and adnexitis; (6) so-called endometritis, including leucorrhœa; (7) menorrhagia and metrorrhagia. He comes to the following conclusions: Curettage in class 1 is hardly ever necessary unless profuse hæmorrhages, resisting usual treatment, demand active interference. In the long run more patients will be saved by non-interference than by even the lightest curetting. Post-abortive bleedings usually disappear under non-operative treatment. In post-partum conditions, also, curettage is never necessary. If placental tissues are retained, they should be removed manually. Whenever the slightest shadow of doubt exists in ectopic gestation, it becomes imperative to avoid curetting and to await further developments. In adnexitis and parametritis with menorrhagia curetting is never advisable unless it is immediately followed by further operative work on the adnexa. Endometritis is rarely benefited by curettage. It certainly does not improve leucorrhœa which is usually of cervical origin. Sterility also would not have been relieved by a scraping if the dilatation of the cervical canal had not preceded it. Ovarian disturbances play a more important rôle in female sterility than suspected abnormal conditions of the uterus.

However, in pre- and post-climacteric hæmorrhages, in menorrhagias and metrorrhagias, *abrasio* is always indicated for diagnostic purposes and the scrapings must be subjected to a microscopic examination. The result will determine the character of further treatment. The use of curette is rarely necessary in abortion, practically never after labor, harmful in pelvic inflammation, often fatal in ectopic gestation. The instrument is of value mainly for diagnostic purposes.

HENRY SCHMITZ.

Wilcox: The Undeveloped Antelexed Uterus and the Sterile Woman. *J. Am. Inst. Homeop.*, 1913, v, 883. By Surg., Gynec. & Obst.

The author gives his views as to the cause, result and treatment of the above condition. He bases his theory for the cause on an embryological factor; namely, a developmental defect at the point where the cervix joins the fundus. This causes an angle to be formed at the junction which results in: (1) a more or less closed cervical canal at the internal os; and, (2) a fundus shut off from its normal blood supply and atrophy.

In considering the uterine ligaments, Wilcox believes that the utero-sacral ligaments, if congenitally short, may by their attachments to the junction between the fundus and cervix cause this acute antelexion.

The author believes that treatment should be begun early when the young girl is just entering womanhood, and the symptoms are usually dysmenorrhœa, or membranous dysmenorrhœa. In treatment, first the uterine canal must be opened up to establish free drainage and straighten out the acute angle. The uterus is next packed twice for periods of 48 hours. Then for 2 months, dilated twice a week; then for 3 months, every other week. Next electricity and bimanual massage may be used to stimulate the growth of the uterus and the latter to stretch the tense ligaments. The duration of treatment should occupy about a year.

EUGENE CARY.

Delle Chiaie: The Relaxation of the Cervix in the Surgical Treatment of Antelexion of the Uterus (Lo svuotamento commessurale del collo nella cura chirurgica dell'antiflessione uterina). *Arch. ital. di ginec.*, 1913, xvi, 39.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author performs Pozzi's stomatoplastic procedure in antelexion and dysmenorrhœa. In twelve cases dysmenorrhœa disappeared, sterility disappeared in two. The operation does not act by the removal of the obstruction to the menstrual blood, the author denying the mechanical theory of dysmenorrhœa, but by improving the circulatory conditions in the cervix, and thereby also in the corpus, so that abnormal contraction and blocking during the premenstrual period is diminished.

MATHES.

Griffith: A Discussion on Ventrofixation; Its Indications, with an Analysis of 77 Cases. *Proc. Roy. Soc. Med.*, 1913, vi, 167.

By Surg., Gynec. & Obst.

Griffith reports in detail seventy-seven cases of uterine fixation to the abdominal wall, though five were really suspensions, four by the Gilliam method and one by that of Webster. His method of fixation consists in passing two silkworm-gut sutures deeply into the anterior uterine wall, beginning just below the attachment of the round ligaments. Both ends of each suture are brought through the peritoneum, rectus, and anterior sheath at a distance above the

pubes, chosen in each case according to the degree of prolapse of the uterus and laxity of the abdominal walls. These sutures are buried in closing the laparotomy wound and have given no subsequent trouble. In cases seen, he has found a close and firm attachment without any fundal or other pedicle. Griffith considers this method an operation of choice in two varieties of cases:

1. Those in which the supports of the uterus are sufficient to maintain it at, or nearly at, its proper level in the pelvis, but in which retroversion or retroflexion of the body of the uterus and adjacent broad ligaments, leading to prolapse of the ovaries, is the cause of serious discomfort.

2. The cases in which prolapse of the uterus, broad ligaments, and ovaries is considerable, and is associated with varying degrees and forms of vaginal, vesical, and rectal protrusion. CAREY CULBERTSON.

Giles: The After-Results of Operations for Uterine Displacements. *Proc. Roy. Soc. Med.*, 1913, vi, 192. By Surg., Gynec. & Obst.

Giles limits his reports to the after-results of a specific abdominal operation, hysteropexy. By this term he means neither ventrofixation, "quite obsolete," nor ventro-suspension, "rarely done," but rather an operation whereby the sutures are passed on each side of the incision through the fascia and peritoneum and through the anterior wall of the uterus as low down as possible, leaving the fundus free to expand in the event of subsequent pregnancy. He discusses the after-results in five paragraphs:

(1) Eighty per cent were better generally as well as locally. In ten per cent more they were improved locally at least.

(2) The bladder shows disturbance in the form of frequent micturition in some cases, but 73 out of 86 had no trouble, 13 being worse off than before operation.

(3) Of the 125 cases under review, 74 were married women under forty years of age. Of these, twelve became pregnant. Eight of these have been confined, all spontaneously but two, who were aided in the second stage by forceps. In this group there have been no miscarriages, though in a former group not previously reported, there were 16 abortions and 44 full-term pregnancies out of 60. In another group of ten confinements following operation, all were spontaneous. As a result of these observations, Giles claims that hysteropexy causes no complications during pregnancy or labor.

(4) The effect of pregnancy on the results of the operation shows that of a total of 37 patients examined after a total of 48 confinements at term, in but one was there a partial return of the displacement. This is no greater (2.7 per cent) than in those cases not followed by pregnancy. One patient had had two subsequent labors and another had had three.

(5) The proportion of permanent cures is as follows: After retroversion in 221 cases, the uterus remained in good position, was partially displaced

in three, and seven gave a total failure. After prolapse, 56 cases remained cured, or 100 per cent. After procidentia, in 50 cases the results were good, one showed a partial recurrence and three were failures. In 341 cases, therefore, 337, or 95.9 per cent, were successful; four, or 1.2 per cent, gave only imperfect results and 10, or 2.9 per cent, were failures.

CAREY CULBERTSON.

Briggs: The Technique of Ventral Fixation of the Uterus and Allied Operations. *Proc. Roy. Soc. Med.*, 1913, vi, 176. By Surg., Gynec. & Obst.

Briggs emphasizes the importance of fixing the uterus to the parietal peritoneum alone and, at that, by the anterior uterine wall only. He employs twisted silk and puts the lowest suture at the summit of the bladder, the higher ones somewhat laterally so that a broad area of the uterine wall is fixed. He agrees with Küstner that mobility with fixation is desirable, and favors this method because it effects (1) a minimum of strain on its own products; (2) rest and recuperation for the already weakened natural supports of the uterus; (3) accurate anatomical adjustments for post-operative pregnancy and labor. The after-histories of 597 survivors, out of 600 operated upon, have been systematically obtained and recorded. The present estimate is that in 98 per cent of the cases the ventral fixation permanently rectifies the retroflexion. In a large number of cases of subsequent pregnancy natural labor has been the rule and easy forceps delivery the exception. In a few cases, retroflexion recurred after labor, and a few of the earlier cases also recurred where the technique had not yet been perfected. Finally, the author emphasizes the importance of an adequate pelvic floor as a platform of support, considering this the primary security for any reasonable ventrofixation.

CAREY CULBERTSON.

Leonard: Post-operative Results of Amputation of the Cervix. *Surg., Gynec., & Obst.*, 1913, xvi, 390. By Surg., Gynec. & Obst.

An analysis of the post-operative results of the cases of amputation of the cervix performed in the Gynecological Clinic of the Johns Hopkins Hospital was undertaken to determine the efficacy of the operation as a curative procedure and its effect if any upon the subsequent marital history. Complete post-operative reports were obtained in 128 cases, upon which the analysis is based.

1. General Health: The patients were divided into three groups according to operation, and the effect on the general health tabulated.

Group	No.	Improved	Same	Worse
1. Amputation alone.	13	12 or 92%	1	0
2. With Perineorrhaphy.	67	60 or 90%	5 or 8%	2 or 3%
3. With Abdom. Section.	48	43 or 90%	2 or 4%	3 or 6%

About 91 per cent of the entire series reported improvement in the general health.

2. Leucorrhœa: Of the 128 cases, 109 had leucorrhœa before operation. Sixty-eight cases reported cure (62 per cent) and in thirty-three cases, there

was noticeable diminution in the amount of the discharge (30 per cent). Nine cases (8 per cent) were unimproved in this respect.

3. Menstrual Pain: The patients were divided into three groups according to the operation. Cases having no pain either before or after operation are not tabulated.

Group	No. Cases.	Less Pain.	No Change.	More Pain.
1. Amputation alone.....	8	4 cases, or 50%	4 cases, or 50%	None
2. With Perineorrhaphy....	47	25 cases, or 54%	17 cases, or 36%	5 cases, or 10%
3. With Abdom. Section....	37	25 cases, or 68%	6 cases, or 16%	6 cases, or 16%

Nearly 60 per cent of the patients noticed marked reduction of menstrual pain following operation.

4. Subsequent Conception: Seventy-two of the cases were under 40 years of age at the time of operation — women in whom the occurrence of pregnancy would naturally be expected. Over 80 per cent of these cases remained sterile, yet of the 14 cases reporting fertility, 10 had two or more pregnancies. The author indicates that post-operative cervical stenosis is probably of frequent occurrence.

5. Influence on the Course of Pregnancy: Previous to operation, the 14 cases reporting fertility had had a total of 52 pregnancies. After operation these same women had a total of 32 pregnancies. The influence of the operation on the course of pregnancy is shown in the following table:

	Before Operation	After Operation
Delivery at full term.....	39 cases, or 75%	14 cases, or 45%
Interrupted before term....	13 cases, or 25%	17 cases, or 55%
		1 case (now pregnant)

It will be noted that the incidence of premature termination of pregnancy is more than doubled after operation.

6. Dystocia: Of the 14 women of the series who became pregnant after operation, 11 had children from the eighth month to full term. A report from these cases on the delivery of the first child after operation shows that 7 of the 11 cases (65 per cent) experienced serious dystocia. The other 4 cases had easy labors.

CONCLUSIONS

1. After amputation of a diseased cervix, 90 per cent of the patients show improvement in the general condition and disappearance (60 per cent) or noticeable decrease (30 per cent) of vaginal discharge, while over half notice marked decrease of menstrual pain.

2. Four fifths of the women in the child-bearing period remain sterile and when pregnancy occurs, there is not more than an even chance of its progressing to full term. In the latter event, serious dystocia will be encountered in the majority of instances.

3. Amputation of the cervix is the operation of choice in elderly women but should be applied to those in the child-bearing period only when more conservative methods of treatment, such as Hunner's linear cauterization or Craig's thorough curettage of the cervix, have failed.

Deaver: A Year's Work in Hysterectomy. *Am. J. M. Sc.*, 1913, cxlv, 469. By Surg., Gynec. & Obst.

The various conditions for which operation was done are shown in the following table:

	Cases
Myoma.....	62
Myoma with sarcomatous degeneration....	1
Adenomyoma.....	3
Carcinoma of the uterus (cervix 8; body 6)...	14
Carcinoma of the Fallopian tube (primary)...	1
Incomplete abortion.....	3
Cornual pregnancy.....	1
Stenosis of the vagina.....	1
Prolapse of the uterus.....	1
Metrorrhagia.....	11
Miscellaneous inflammatory conditions....	11
	109

The operations were:

Complete hysterectomy.....	31
Vaginal hysterectomy.....	4
Supravaginal hysterectomy.....	74
	109

From post-mortem statistics it has been shown that about one tenth of all women have one or more myomata of the uterus, varying in size and symptoms. Therefore, Deaver takes an intermediate position between the advocates of conservative treatment and those urging operation on diagnosis. Furthermore, he believes in no relation between fibroids and inflammatory conditions of the adnexa or ovarian cyst formation. The benign forms of degeneration are not sufficiently serious to warrant preventive surgery, but he does think that uterine myoma predisposes to corporeal cancer, which as a complication is more frequent than cervix involvement. The chief argument for the removal of fibroids is presented by and not before the occurrence of symptoms. There should be no waiting for menopause in the vain hope of the disappearance of symptoms. Already enough is known of the inefficiency of the X-rays in the treatment of deep-seated growths to discount the optimistic reports of some Röntgenologists. As to carcinoma frequency, the author's opinion is discouraging. He regards operation here as of little more value than to relieve the mind of the patient, whereas the blame of failure to cure rests on surgery. He states that practically the only cases of uterine cancer that he can claim to have cured are those operated upon before the disease had actually been demonstrated to be present. Uterine hæmorrhage must continue to be regarded as a danger signal and the difficulty in establishing this point of view comes from two sources: (1) The disinclination of many women to secure advice upon the subject until the disturbance is marked and the disease, if cancerous, far advanced; (2) the failure of the physician to consider the serious aspect of uterine hæmorrhage until secondary symptoms appear. The remedy lies in education and the profession is chiefly at fault. Eleven uteri in this series were removed for irregular or severe hæmorrhage

where cancer had not first been proven and where it had been suspected in several only.

CAREY CULBERTSON.

Ostrom: A Cradle Suture for Holding the Uterus in Ventro-Suspension. *North Am. J. Homeop.*, 1913, xxviii, 199. By Surg., Gynec. & Obst.

The author describes here the method he uses in doing a ventral suspension of the uterus. The sutures he uses act in the long axis of the rectus muscles when first introduced, then transversely to their fibers when tied.

With the fundus held up in position, a heavy needle threaded with silkworm-gut is carried down through the rectus muscle three quarters of an inch from its mesial border and after taking a good bite in the uterus is brought out again in the same rectus one inch higher up so that the two ends of the suture lie in the longitudinal plane of the peritoneal opening. The same procedure is followed on the opposite side, and after the closure of the peritoneum the silkworm-gut sutures are tied across the line of the closure, thus forming a cradle-like uterine suspension.

The author states that in several years' experience with this method he has never failed to get permanent fixation, and that the buried suture material has never caused any inconvenience or even made its presence known.

C. D. HOLMES.

Fothergill: Clinical Demonstration of an Operation for Prolapsus Uteri Complicated by Hypertrophy of the Cervix. *Brit. M. J.*, 1913, i, 762. By Surg., Gynec. & Obst.

The author emphasizes the objection to the classical operation, as it shortens the anterior vaginal wall and the uterus is left in a retroverted position which favors a recurrence. His modification of the anterior colporrhaphy where there is considerable hypertrophy of the cervix consists in dilating the cervical canal and then making a circular incision around the cervix with a knife. The vaginal wall and bladder are pushed back and the cervix is deeply slit laterally into anterior and posterior lips. The cervix is amputated and the bleeding controlled by sutures. The circular vaginal wall is incised about an inch on either side, the new cuts going to the right and left. The anterior vaginal wall is separated from the parametric tissues and the bladder and a triangular portion with its apex near the urethral orifice is cut away. In closing the incision, the first suture brings together the center of the posterior margin of the vaginal incision and the mucosa lining the posterior wall of the cervical canal. The second and third sutures unite the vaginal wall and cervical mucosa until the vaginal incision comes together in front of the cervical stump. The lateral edges of the vaginal wall are brought together in the middle of the anterior vaginal wall by interrupted sutures from behind forward until the urethral end is reached. The operation is finally completed with the repair of the perineum.

R. T. GILLMORE.

ADNEXAL AND PERIUTERINE CONDITIONS

Graves: Influence of the Ovary as an Organ of Internal Secretion. *Am. J. Obst.*, N. Y., 1913, lxvii, 649. By Surg., Gynec. & Obst.

Graves reviews the knowledge obtained by various means to date and concludes:

1. Anatomical evidence makes it probable but not incontestable that the ovary is an organ of internal secretion.

2. Infantilism is not a result of ovarian deficiency but is a local or general manifestation of a hypoplastic constitution in which the ovary may or may not share incidentally.

3. After sexual maturity the ovary exercises a trophic influence over the other internal and external genital organs.

4. There is evidence to show that the ovaries preside over menstruation by an internal secretion which has a selective action on the endometrium; and that abnormal bleeding may be due to a hypersecretion of the ovaries. This evidence is not incontestable.

5. Transplantation of ovarian tissue has not as yet proved to be of great practical value in the surgical treatment of gynecological patients.

6. Castration of sexually mature women directly causes vasomotor symptoms typified by hot flashes in 80% of cases.

7. Definite psychoneuroses are not directly caused by castration, but such symptoms, if present, are due to other causes that produce psychical or mental pain or discomfort.

8. Ovarian extract is invaluable in the treatment of the vasomotor disturbances following castration. Its value in the treatment of other gynecological conditions is problematical.

N. SPROAT HEANEY.

Lauwers: Metastatic Sarcoma of the Broad Ligament Associated with Fibromyoma of the Uterus (*Sarcome à métastases du ligament large associé à un fibro-myome de l'utérus*). *Bull. Acad. roy. de méd. de Belg.*, 1913, xxvii, No. 1.

By Journal de Chirurgie.

A nulliparous woman of 54 with a large fibroid of the uterus had also a small node the size of a pea which was movable beneath the skin and was situated in the midline in the epigastric region. Lauwers excised this node first and then enucleated the uterine fibroma. In doing this he found a nodular tumor situated at the base of the left broad ligament and not connected with the uterus. By microscopic examination, this tumor and the subcutaneous nodule were found to be similar. They were both spindle-cell sarcomas, the nodule being a metastatic growth. The patient recovered and was apparently in perfect health, but died three months later from multiple pulmonary metastases. The interesting thing about this case was the coexistence of a large benign fibroid of the uterus and a small sarcoma of the broad ligament which were different grossly and histologically and in no way connected. L. MAYER.

McMorrow: Some Old Pelvic Inflammatory Diseases, Their Non-surgical Treatment; with Report of Cases. *J. Am. M. Ass.*, 1913, lx, 966.
By Surg., Gynec. & Obst.

The author discusses the use of massage in the treatment of selected cases of chronic pelvic inflammatory disease, and gives his results with this procedure in a series of six cases. He also states that his method is that adopted by the general hospital in Vienna for the same conditions.

With the index and middle fingers of the left hand he steadies and supports the cervix by lifting it up, while with the right hand on the abdomen he massages the uterus by a series of gentle rotary movements. These movements are performed ten or fifteen times at the first treatment, and if no unusual pain or soreness follow in the next day or two he continues the same treatment two or three times weekly until the patient is relieved of her symptoms. He states that even in patients with rigid abdominal walls the posterior surface of the uterus may be massaged well and a retroverted uterus put up in good position by a gradual stretching of the various adhesion bands and a lengthening of the utero-sacral ligaments. Better muscular tone is thus established and also improved exudation and circulation. The author states that this method is applicable to cases of chronic perimetritis and parametritis, but that pelvic massage is absolutely contra-indicated in any acute inflammatory condition, recent pus collections, fibroids, ectopic pregnancy, or in tubo-ovarian disease.

He reports his series of cases chiefly to show how often chronic conditions other than diseased uterine adnexa are met with, and how often they may be relieved by pelvic massage.

In the author's series of cases he states that he has succeeded in relieving the symptoms of backache, and general pelvic tenderness; also that he has been able permanently to establish normal menstruation in patients who have been troubled with painful periods and a very small amount of menstrual discharge.

C. D. HOLMES.

EXTERNAL GENITALIA

Bandler: Vaginal Surgery. *N. Y. M. J.*, 1913, xcvi, 797.
By Surg., Gynec. & Obst.

Anterior colpotomy, posterior colpoperineorrhaphy and vaginal hysterectomy with the author's modifications and illustrations of cases are described. He advocates a T-incision for the purpose of completely separating the bladder from the anterior vaginal wall and cervix so that it is practically free except at its attachments to the ureters and urethra, thus rendering the pelvic cavity more accessible. He uses the anterior colpotomy to perform vaginal fixation, remove tubal gestations or amputate the uterus above the cervix or to remove it entirely. He narrows the lumen of the vagina by a high colpoperineorrhaphy, with a resection of most or all of posterior vaginal wall. He then inserts a levator

ani muscle suture and fixes the upper part of the newly made posterior vaginal wall to the upper border of the newly united levator ani muscles. He thus erects in the middle of the posterior vaginal wall a transverse fascial and muscular wall which aids in keeping the cervix up where it belongs. This is an essential point in the permanent cure of prolapse.

Bandler advocates the use of clamps in vaginal hysterectomy under the following conditions: wherever haste is desired or the uterus is very long and broad ligaments are retracted; where the broad ligaments are infiltrated; after morcellement, irregular areas of uterine tissue are left attached to the broad ligament; or where the infundibulo-pelvic ligaments are short. At the conclusion of the operation the vagina is packed with gauze in such a way as to surround the clamps and to prevent them from pressing against the vaginal walls and perineum. The clamps are supported by wide strips of adhesive plaster attached to the thighs, after the legs have been extended. This also prevents them from pressing on the external genitalia. The clamps are removed at the end of 36 to 48 hours without disturbing the patient from her bed. HENRY SCHMITZ.

Robb: Examination of the Pelvic Organs in Doubtful Cases Through a Vaginal Incision. *Cleveland M. J.*, 1913, xii, 269.
By Surg., Gynec. & Obst.

The author refers to the difficulties encountered in making a correct diagnosis by a bimanual examination. Considering the dangers of an exploratory laparotomy he advises exploration through an incision in the posterior vaginal vault and illustrates the correctness of his procedure by the histories and vaginal explorations of five cases. If indications exist he immediately follows the vaginal exploratory operation by a laparotomy.

His conclusions are as follows: 1. If doubt exists as to the necessity of an abdominal operation, explore the pelvis through an incision in the posterior vaginal fornix. 2. Many unnecessary abdominal operations will be avoided by this procedure, whereas often times a marked inflammatory condition will be made out which otherwise would have escaped our notice and which indicates a necessary operation. 3. Another advantage is that adherent structures can be separated through a posterior colpotomy, thus doing away with the necessity of an abdominal operation altogether. HENRY SCHMITZ.

Fitzgibbon: Gonorrhœal Vaginitis Treated by Vaccine. *Med. Press & Circ.*, 1913, cxlvi, 385.
By Surg., Gynec. & Obst.

The author reports six cases of gonorrhœal vaginitis in which he used vaccine treatment. Four cases cleared up uninterruptedly from the beginning of treatment, the other two improved, but some relapsed; one of these finally seemed perfectly cured, the other is under treatment. He believes that the best results follow the use of

vaccines from new cultures and that one should begin with a dose of 4 or 5 million and increase to a maximum of 10 million for adults—using smaller doses for children. He is impressed with the results shown and expects to continue it in future cases. Great care was employed in establishing the diagnosis in each case. C. H. DAVIS.

Lothrop: An Operation for the Cure of Vaginal Hernia. *Boston M. & S. J.*, 1913, clxviii, 578.
By Surg., Gynec. & Obst.

The author reports an interesting case of vaginal hernia and gives the technique of his operation. The patient had twice before been operated for a supposed rectocele. The hernia sac contained small intestine.

Technique of operation: The patient was placed in the Trendelenburg position and the abdomen opened by a median incision, the intestines then being packed away with long wet gauze strips. The broad ligaments were divided close to the uterus, the anterior half of which was removed down to the cervix, the uterine canal being included in this excised portion. The broad ligaments and remaining half of the uterus were utilized later to help form a support to the floor of the pelvis. The peritoneum was next dissected from the lining of the sac and deeper portion of the pelvis. A transverse incision was made at the level of the cervix uteri and just behind it, and continued in front across to either side of the pelvis. The posterior edge of the peritoneum was then dissected up and the stripping continued until the rectum and the floor of the pelvis were exposed. The lax vaginal wall was then pushed down out of the way. A pelvic floor was made by suturing with chromicized catgut, the broad ligaments stretched horizontally across the pelvis and overlapped. The remaining half of the uterus was tilted back over the ligaments, and its two free corners sutured to the pelvic fascia on either side of the rectum, leaving just room for passage of the rectum. The peritoneum was closed over this new floor and the abdomen closed. The excess of tissue in the vagina was removed as in the ordinary splitting operation for rectocele. The patient was kept in bed four weeks. From the result as seen three months later the author believes the vaginal hernia is cured. C. H. DAVIS.

Buford: Large Urethral Caruncle in a Girl of Nine Years; A Preliminary Note with a Summary of the Subject. *J. Am. M. Ass.*, 1913, 12, 1281.
By Surg., Gynec. & Obst.

Buford reports the case of a girl aged nine years who was admitted to the hospital in May, 1911. One year previously she had fallen down stairs while roller-skating. Two days after the accident the mother discovered that there had been bleeding about the vulva, and on examination found in the region of the urethra a mass about the size of the end of her thumb protruding from the labia. During this year the size of the tumor had not changed,

although it had been treated by a number of physicians. A purulent discharge was always present but there was no itching and no discomfort on urination. The tumor-base extended almost all over the circumference of the urethral canal and up into the urethra for about a quarter of an inch. The surface was not eroded, and there was no tumor in the bladder. No pus could be expressed from the Skene or Bartholin glands. A purulent discharge from the urethra kept the parts moist. Vaginal smears were negative for the gonococcus, though they were found later. The tumor was excised well outside of its borders and the surrounding skin drawn into the meatus and stitched with horse-hair. Primary union took place, and there had been no recurrence up to November, 1912.

The author refers to the complete bibliography of Williamson and Alter for the literature on this subject.

These tumors are covered by epithelium, are usually about the size of a split pea, may be pedunculated or flat-based, and are usually located on the lower half of the urethral orifice. They occur more frequently in multiparæ, and are rarely large in girls. Some cause pain of a severe nature, others are devoid of sensation.

Their etiology is uncertain, though the retention of droplets of urine in the urethral canal with the resulting irritation and tissue changes is a probable factor in their development.

The most satisfactory treatment for this condition is complete excision well outside and below the tumor. If they are not completely removed they tend to recur. C. D. HOLMES.

MISCELLANEOUS

Kermauner: The Etiology of Gynatresias (Zur Ätiologie der Gynatresien). *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 137.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Partial atresias are congenital or acquired. The post-natal causes have not been proven in numerous instances. Kussmaul's theory that an inflammation of the vagina of uterine origin results in inflammatory adhesions and obliteration is untenable. The belief that hymenial atresia is congenital is tenable, but how is it to be explained? The author assumes that at some time during the foetal life, certain cells undergo coagulation necrosis as a result of some chemical influence, thus the part depending on those cells is retarded in its development. Either a stenosis or an atresia is seen, depending on the grade of development of Müllerian ducts.

The size and character of the hæmatocolpos, the thickening and irregular formation of its walls, all speak for an excessive growth of the internal genitals above the atresia. A hydrocolpos develops first and gradually changes into a hæmatocolpos on account of the marked exfoliation and secretion of the hypertrophic mucous membrane. By adaptation to surroundings the development of large tumors can

occur without any clinical phenomenon. Atresias are frequently accompanied by hæmatosalpinx. It is almost always associated with atresia of the abdominal tubal ostia and dependent on peritoneal adhesions. A genuine infection is not to be assumed although the content of the hæmatocolpos, gaining entrance to the abdominal cavity through the tube, will set up an irritation peritonitis. The variable size of the tube in low and high atresia is explained as being the result of excessive growth of this organ with the formation of a hydrosalpinx. HIRSCH.

Bell: Genital Functions of the Ductless Glands in the Female. *Lancet*, Lond., 1913, clxxxiv, 809. By Surg., Gynec. & Obst.

This is the first of two lectures on the subject. The author believes that we should look upon all the ductless glands as genital glands, as each is absolutely indispensable to the harmony of the genital functions. From his study of the ovary in various animals he draws the provisional conclusion that, if the corpus luteum be an organ of internal secretion which assists in the implantation of the ovum, the importance of it varies with different species, and probably it has more than one function.

He made a careful study on cats of the effects of oöphorectomy on general metabolism. In a study of the urine it was found that while the specific gravity remained nearly the same after operation, the calcium excretion was diminished by one half; the chlorides were slightly diminished, while the phosphorous excretion, total nitrogen and urea percentages were much increased. This supports the belief that the ovaries take an active part in promoting the excretion of calcium, especially in connection with menstruation, and explains why oöphorectomy may aid in the cure of osteomalacia. The differences in the effects of oöphorectomy in women are, he thinks, due to the individual variation between the adjustments of the internal secretion. Oöphorectomy causes a more marked reaction in rodents, than in other mammals. In his cats he found the thymus larger after oöphorectomy than in the normal adult animal. He believes that the pituitary body must be considered as *one organ* and not two. The effects of oöphorectomy on the pituitary is more or less temporary and in no way comparable with the genital lesions seen after partial removal of this gland. These effects are not comparable with those found in pregnancy.

Total ovarian insufficiency arouses increased activity in most, if not all, of the other ductless glands. C. H. DAVIS.

Bell: The Genital Functions of the Ductless Glands in the Female. *Lancet*, Lond., 1913, clxxxiv, 937. By Surg., Gynec. & Obst.

The author has in this lecture considered the effect of removal of the various ductless glands, other than the ovary, on the remaining members, and on the general metabolism in so far as it is directly related to the genital functions.

He believes that rodents have less need of the thyroid than other mammals, such as the carnivora, and that this is due in some measure to the variations in the structure and function of the other ductless glands. His experiments on pregnant cats are in favor of the possibility that in the latter half of pregnancy the secretion of the foetal thyroid may be conveyed to the mother. He does not believe that the thyroid is in any way specifically connected with the production of eclampsia. Thyroidectomy calls for a response from the ovary, just as oöphorectomy from the thyroid. The nature of this response brings forth evidence that the granulosa cells of the Graafian follicle form an organ of internal secretion. The uterus atrophies to a considerable extent. Thyroidectomy stimulates the suprarenal cortex to excessive secretion, and this no doubt tends to produce calcium retention and to prevent excretion. It causes an increase in the secretory activity of all parts of the pituitary body.

The pineal gland has never been successfully removed from mammals, so the only direct evidence is that obtained clinically. A few years ago, the author, with Dale and Dick, showed that an extract of posterior lobe produces powerful uterine contractions. The observations after partial removal of the pituitary are very confusing and the author believes that these can only be dispelled by considering the entire gland as one organ.

It appears that the thymus either inhibits the development of the ovaries (Biedl), or that their development follows the withdrawal of the thymus secretion. Little is known concerning the relation of the thymus to the general metabolism.

In most mammals complete removal of the suprarenals causes death in from a few hours to a few days, but with the unilateral removal the author obtained some interesting results with regard to metabolism in two rabbits. In one, the average quantity of calcium excreted after operation was seven times as great as before, and in the other it was sixteen times as much. The phosphorus was much increased but not in the proportion one might have expected. The urea was increased out of the proportion to the difference between the specific gravities. A study of the pituitary body appeared to indicate that an attempt is made to counterbalance the loss of adrenin by the rapid production of infundibulin. There appeared to be no histological changes of importance in the ovaries, but there was evidence of muscular atrophy in the uterus.

The ovary is only concerned in the temporary function of reproducing the species, and, by its hormones, or internal secretion, of bending the metabolism of the body to its purpose. When the reproductive functions cease and the ovaries atrophy at the menopause the harmony that previously existed between the general and the genital metabolism is temporarily deranged, and various disturbances may ensue. And it is only by the careful investigation of each menopausal case that one can arrive at a determination of the manner in which

the balance has been upset. Some patients react to thyroid extract, some to pituitary, others to combinations, so great are the individual variations. In most cases a natural readjustment takes place in the course of time.

C. H. DAVIS.

Smith: The Prognostic Value of the Leucocyte Count in Pelvic Suppurative Conditions.
Surg., Gynec. & Obst., 1913, xvi, 403.

By Surg., Gynec. & Obst.

The histories of one hundred unselected cases of pelvic suppurative conditions of various kinds were studied. In all of these, a leucocyte count had been made as a routine procedure upon the admission of the patient. These pre-operative leucocyte counts were tabulated in their relation to the post-operative progress of the patient as regards temperature, pulse, complications, secondary operations, and the like. The question is raised as to whether or not the leucocyte count forms a better basis for the establishment of a prognosis in any given case than does the temperature and pain and the like. Where the leucocyte count was high upon admission, even though the temperature was low, the patient was shown to have a febrile convalescence nearly twice as frequently as when the pre-operative temperature was high, but the white count low. The same relation, though somewhat less marked at times, was shown in the development of other post-operative complications—mortality, rapid pulse, secondary infections, and the like. The conclusion is reached that, at least in this group of cases, the leucocyte count was of markedly more prognostic value than were the pre-operative temperatures.

Alperin: Reflex Pains on Pressure of Coeliac Plexus in Inflammations of Female Genitals (Reflektorische Schmerzempfindungen bei Druck auf den Plexus coeliacus bei entzündlichen Erkrankungen der weiblichen Geschlechtsorgane). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 340.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Alperin examined 309 women in whom pressure was applied to the coeliac plexus. He comes to the following conclusions: (1) When pain radiates to the epigastrium after pressure on the solar plexus, then the endometrium is involved. (2) When pain radiates to the symphysis, then the parametrium is involved. (3) When pain radiates to the right and left sides, the adnexæ are involved. (4) When pain radiates to back, there is a metritis or fibrosis of uterus. (5) When there is pain directly under the finger, the genitals are not involved. The findings in 88 per cent of his cases were corroborated on operating.

HENCH.

Dibailoff: Enlargement of the Liver During Menstruation (Vergrößerung der Leber während der Menstruation). *Vrach. Gaz.*, St. Petersburg, 1913, xx, 439.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author examined one hundred women to determine the size of the liver during and after

menstruation and found an enlargement by percussion varying from two and one half to four fingers' breadths in nine cases, two fingers' breadths in thirty-three cases, one and one half in nineteen cases and one finger in thirty-seven cases. No enlargement was found in two cases. Palpation elicited the same findings. In seventy-three women, the liver was painful, in twenty-four it was sensitive, in three it was normal. The enlargement persisted two to three days after cessation of menses. Between the menstrual periods the liver was of normal size.

BRAUDE.

Hirschberg: Thigenol in Gynecological Treatment (Das Thigenol in der gynäkologischen Therapie). *Berl. klin. Wchnschr.*, 1913, l, 597.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Thigenol, in comparison to other sulphur preparations, has the advantage of being odorless and more easily absorbed by the skin and mucous membrane. It is especially adapted for tamponing, using a 20 per cent solution of thigenol in glycerine. The tampon must be changed every other day. In the meantime vaginal irrigations are ordered composed of a tablespoonful of the above solution in one liter of warm water. Thigenol capsules which dissolve easily in the vaginal secretion are especially useful for the general practitioner. The preparation has shown beneficial results in cases of subacute and chronic inflammations of the pelvic connective tissue, the adnexa and the pelvic peritoneum. The pain subsided, the inflammatory tumefaction decreased, the exudation was absorbed, and adhesions of the pelvic organs gradually disappeared. Tampon treatment is contra-indicated in recent inflammations and purulent catarrhs.

LIEBICH.

Heimann: X-Ray Treatment in Gynecology (Die gynäkologische Röntgentherapie). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 325.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After a short review of the development of X-ray treatment in gynecology from the simple method of Albers-Schönberg to the intensive raying of the Freiburg clinic, a minute description of the technique used in the Breslau clinic is given. The apparatus consists of a 50 cm. induction coil and a record interrupter with a Rythmeur. Either Müller's water cooled or Gundelach's coil cooled tubes are used. The degree of hardness (9.5-11 Wehnelt) of the tube should be determined every 4 to 6 weeks. The time in which the tube causes an erythema must be found, measuring by either Kienböck's or Sabouraud-Noire's method. The tube employed has a diameter of 12 cm., therefore the focal distance from the skin is 28 cm. The aluminum filter has a thickness of 3 mm. Thus by compression a desensibilization of the skin is caused. Five fields are regularly rayed, three on the anterior abdominal wall, middle, right and left, and two on the back, right and left. To each field one half of an erythema dose is applied on five successive days.

There is an interval of eight days between the two series and two to three weeks after the third series. The treatments are given without regard to menstruation.

In six cases of myoma, positive results as regards oligomenorrhœa and amenorrhœa were obtained. A disappearance of the tumor was not observed, but a marked decrease in size was seen in all. An average of 120 times was used to obtain an oligomenorrhœa or amenorrhœa and the time of treatment was two and one half to three months. X-ray treatment is to be preferred to surgical castration, because the symptoms of the premature menopause are not so intense. The contra-indications for raying are as follows: Suspicion of malignancy, large myomata which cause pressure symptoms, submucous myomata which are just being expelled, putrified and purulent myomata, cases in which a positive diagnosis can not be made and complications in the adnexæ. The Röntgen treatment is not contra-indicated in extremely exsanguinated women.

The success in metritic and climacteric hæmorrhages chiefly depends on the age of the patient. Thus in women below 40 years of age an oligomenorrhœa, and the re-establishment of normal menstruation, is obtained in spite of long continued raying, while women above 40 years become amenorrhœic in a much shorter time. The average amount of rays for the production of amenorrhœa in the latter was 110 X, and to produce oligomenorrhœa in the former it was 130 X. The duration of treatment is three months. A curettement and microscopic examination of the removed tissues regularly precedes the X-ray treatment, so as not to overlook a corporeal carcinoma. Even accessory symptoms were not observed in any of the rayed cases. Finally, three cases of carcinoma are mentioned. A vulvar cancer which had recurred several times remained free from any recurrence after X-ray treatment. In two other patients with inoperable glandular recurrence, after an extended radical extirpation of a cervical cancer, an increase in the size of the tumors was observed during the raying. BORELL.

Theilhaber: The Influence of the Social Factor Upon the Origin of Tumors (Der Einfluss der sozialen Lage auf die Entstehung von Geschwülsten). *Krankh. u. soz. Lage*, 1913, iii, 608.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Theilhaber discusses in this communication the influence of the social position on the origin of tumors of all organs. However, only that part which interests the gynecologist especially, as it concerns cancer of the reproductive organs, is considered here.

The apparent frequency of uterine cancer in

women married to restaurant keepers and butchers was observed from the cases in Theilhaber's clinic and the death certificates of the city of Munich and the kingdom of Bavaria. The author explains this fact as due to the injurious influence of alcohol on the walls of the blood vessels and the blood circulation in the former and to the large amount of meat consumed in the latter. These facts, however, are not conclusively proven. During the years 1871-1875 only one death from uterine cancer occurred to every 10,000 of population; in the period 1907-1909, however, two deaths occurred, while the mortality of cancer decreased slightly during the same period. Whether increase of carcinoma cases really occurred or whether it is only apparently on account of the improvement in diagnosis cannot be stated definitely. Theilhaber has grouped his cases of cancer and myoma of the uterus according to the social position of his patients. He discovered that myomata developed relatively frequently in wives of financiers, commercial men, manufacturers, high officials, physicians, etc., and carcinomata relatively infrequently. Felix Theilhaber, son of the author, in conducting an investigation based on 1293 cases of cancer of the uterus obtained from material in the bureau of statistics of Bavaria and its seat of government, Munich, arrived at a similar conclusion. The author, therefore, advances the hypothesis that cervical cancer (approximately 90 per cent of uterine cancers occur primarily in the cervix) shows the opposite relation and that the frequency of uterine myomata is in direct relation to the social standing of the patient. He also ascertained from his own clinical material that the much rarer corpus cancer is frequent in the wealthy and that cervical cancer, if it does occur in the upper classes, appears at a much older age than amongst the poorer classes, and finally that the wives of butchers and restaurant keepers are much more frequently affected with cancer and only rarely with myoma. According to Theilhaber, as is shown by his own clinical material as well as by the records of death certificates of the city of Munich, there is greater frequency of mammary cancer in the better situated women than amongst the poor. Theilhaber explains these facts as follows: The frequency of uterine cancer in the poorer classes is not dependent on the greater number of confinements in this section of population but upon the fact that the better situated women menstruate on an average five years longer than the poorer women. In the congested uterus, myomata develop more frequently, whereas cancers develop in the poorly nourished organ. The better situated women suffer most frequently from cancer of the breast because they lace more tightly and nurse less frequently than the poorer women. FISCHER.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Engelhorn: Biologic Diagnosis of Pregnancy
(Zur biologischen Diagnose der Schwangerschaft).
München. med. Wchnschr., 1913, lx, 587.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Engelhorn tested Abderhalden's pregnancy reaction with the dialysis method and the ninhydrin reaction. Technically the serum must be free of hemolysis. Diffusion capsule No. 579 must be tested for albumin and peptone. The placenta is extracted with ten times the amount of boiling water, until the boiled water does not react with minhydrin. The blood was always taken at 4 P.M. The following tests were made each time: (1) placenta alone, (2) pregnancy serum, (3) pregnancy serum plus placenta, (4) serum of a nonpregnant, (5) this serum plus placenta.

Results: of sixty pregnant women, forty-nine gave positive and eleven negative results. Of forty-eight nonpregnant, thirty-one were positive and seventeen negative. Besides placental tissue, cancer, ovarian and liver tissues were tested. Twelve pregnant women reacted to the cancer test ten times positively and twice negatively. Eleven nonpregnant women reacted eight times positively and three times negatively, among whom was one case of cancer. Three nonpregnant women reacted three times positively and three pregnant women once positively and twice negatively with ovarian tissue. With foetal liver different results were obtained. The author concludes that Abderhalden's dialysis method is not a specific reaction, so that we are not justified in basing a diagnosis on it. SCHLIMPERT.

Van Tussenbrock: Influence of Pregnancy on the Death Rate of Tuberculosis in the Netherlands. (Invloed van Zwangerschap op de Tuberculosesterfte in Nederland). *Niederl. Gynaec. Ges., Sitzungsber.*, 1913, Feb.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Tussenbrock tabulates the Dutch material from 1865 to 1900 for four large and twelve smaller cities according to the method of Weinberg. In the four large cities 43 of 128,349 puerperæ (or 3.4 in each ten thousand) died, while in the sixteen towns the deaths numbered 62 in 178,867 (or 3.8 in each ten thousand). The general death rate of tuberculosis in the four large cities is 2,164 in 817,814 deaths, or 26.40 per 10,000, while the monthly death rate is 2.11 per 10,000. The monthly death rate in the puerperium was 3.4 per 10,000. It follows that of three women dying during the puerperium one must succumb to tuberculosis. The influence of pregnancy and the puerperium on tuberculosis may be active also after the first month. To prove

this the author collected 1,209 cases of women in Amsterdam who died from tuberculosis, 710 of whom had children, while 90 were married and childless, and 49 were single. Of these, 174 died within one year after the last labor. In other words, 1,209 of 422,123 women died from tuberculosis, or 28.6 per 10,000, and 174 of 64,371 recent mothers, or 27.03 per 10,000. The tuberculosis mortality post-partum is practically somewhat smaller than the general tuberculosis mortality. This apparent contradiction to the fact that the tuberculosis mortality is increased the first month after labor is explained by a careful investigation from month to month, from which it follows that 111 of the 174 deaths occurred during the first half year (111 in 64,371, or 17.24 per 10,000) and only 63 during the second half year (63 in 64,371, or 9.79 per 10,000). The general mortality (28.6 per 10,000) amounts to 14.3 per 10,000 for each half year. The tuberculosis mortality post-partum, therefore, is much higher during the first and much lower during the second half year. The increased mortality during the first half year is evened up by the lowered mortality during the second half year. The same facts hold good for Amsterdam as Weinberg determined for Saxony and Stuttgart. The first year post-partum does not increase the tuberculosis mortality. The mortality from tuberculosis in Amsterdam in the married (of 800 only 90 were childless) and in the unmarried in each 10,000 living is as follows:

	1865	1875	1885	1895	1900
Married	42.5	42.1	35.1	24.3	23.1
Unmarried	31.7	35.2	25.0	20.1	18.8

The decrease in mortality, greater among the the unmarried, is to be explained by social conditions, especially by the more unfavorable conditions of life where married women come to live with tuberculous men. It also proves that the tuberculosis mortality of women does not become more favorable after the menopause. STRATZ.

Sampson: The Influence of Ectopic Pregnancy on the Blood Supply of the Uterus, With Special Reference to Uterine Bleeding; Based on the Study of 25 Injected Uteri Associated With Ectopic Pregnancy. *Tr. Am. Gynec. Ass.*, 1913, May.
By Surg., Gynec. & Obst.

The author stated that as a result of ectopic pregnancy the uterus was enlarged, due mainly to hyperæmia and a thickening of the endometrium. The changes in the latter were similar to those found in the decidua vera of early uterine pregnancy and apparently due to arterial invasion from the terminal branches of the uterine artery. The

venous spaces of the endometrium were dilated and this dilatation was most marked in the superficial portion of the compact layer and at its junction with the spongy layer. The termination of the pregnancy was followed by involution of the uterus.

The first step in the involution of the endometrium was seen in the greater dilatation of the venous spaces, probably due to regressive changes in the stroma and apparently dependent upon a diminished supply of arterial blood. The arteries were less evident during involution of the uterus. The dilatation of the venous spaces was followed by the escape of venous blood in the tissues of the endometrium. If the superficial venous stasis of the compact layer gave way, the blood would escape into the uterine cavity, without the formation of a decidual cast. On the other hand, if the venous spaces at the junction of the compact and spongy layer gave way, the extravasation of blood would occur mainly between these two layers, and the compact layer would be expelled as a decidual cast. In time the regressive changes ceased and were followed by a reparative process which was apparently dependent upon the respiration of the arterial supply of the endometrium. The involution following the termination of tubal pregnancy was very similar to that following uterine pregnancy, differing only in degree.

In the vast majority of cases of ectopic pregnancy the complete termination of the pregnancy was a gradual process often taking several days or weeks—four weeks or more in seventeen of the twenty-five cases studied. When operated upon the uterus had been and might still receive stimuli from two distinct antagonistic sources; namely, pregnancy and involution. The condition present in any case depended upon which of these sources predominated and to what extent it had been and was influenced by the other.

The uterine bleeding was of venous origin from the venous plexus of the endometrium due to regressive changes in the latter, apparently dependent upon a diminished arterial supply. Muscular insufficiency might also contribute to this. The bleeding continued as long as the pregnancy (products of conception) interfered with the process of involution. It was probably analogous to the bleeding in subinvolution of the uterus due to an incomplete uterine abortion.

In discussion, HARRIS said that to one who had performed a good many operations for ectopic gestation, to be specific 228, it was interesting to have this unquestionable demonstration of the changes which occurred in the uterus. Of what practical use is the uterus after operating upon a patient for an ectopic gestation? According to Smith and others, the number is exceedingly small, not more than four or five women, after being operated for ectopic gestation, having given birth to children. Possibly there were four out of the 228 on whom he operated. In thirteen of these the ectopic gestation was recurrent. The only point which

came to his mind now was whether, in order to secure only four or five offsprings in possibly 228 cases, we should save the uterus, not sacrificing menstruation, for the little interest in future offspring.

SAMPSON, in closing the discussion, said in eleven cases of the series, the uterus was retained when the opposite tube was examined, because the women wished to have children. In every case he talked over the possibility of children before operating. He had followed the future history of these eleven cases; five of them had not become pregnant, although in two of them only a few months had elapsed since the operation. Two had borne children, one two and the other one, and the one who had one child subsequently had tubal pregnancy in the opposite side. Three had had miscarriages, although they claimed they desired to have children. One had three miscarriages and the other two had one each. Another, the sixth one, had tubal pregnancy in the opposite side, making two cases of repeated tubal pregnancy in the eleven cases in which, at the time of operation, the tube which was the seat of the second ectopic gestation was apparently normal, and which was retained with the hope that the woman would have a child subsequently. He had encountered two other cases of repeated ectopic pregnancy in which the first operation was done by another operator, so that he did not know the condition of the tube at that time. He was perfectly willing to preserve the tube and the possibility of future conception in every patient who desires to have children. On the other hand, if he found the opposite tube was diseased, and especially if a number of these women were fairly well advanced in years, that is 35 or 40, and had had their share of children, he thought we should in every way make these patients just as well as we possibly could for the rest of their lives, and save them all future trouble. He could see very little use in leaving behind a uterus which might have been the seat of inflammatory trouble or adhesions about it as the result of operation if it was only going to cause trouble.

In regard to bleeding without pain, all but one of these patients gave a history of uterine bleeding at some time during the illness. In one case the bleeding preceded the pain for three or four weeks, and he could not account for it except probably there was the beginning of the termination of pregnancy in which the bleeding between the gestation sac and the wall of the tube was not sufficient to give rise to any serious symptoms.

In regard to preserving the ovaries, in nearly every instance one ovary was preserved.

Andrews: Ectopic Pregnancy Occurring Twice in the Same Patient. *Australas. M. Gaz.*, 1913, xxxiii, 232. By Surg., Gynec. & Obst.

The author reports a case which is of interest because of its rarity, and the wholly different train of symptoms. On the first occasion pain was moderate; hæmorrhage rather free and constant;

temperature elevated to 102.8°, and a distinct swelling in the position of the tube. Curettement released the symptoms, including the swelling. The scraping showed what appeared grossly as placental debris. Two weeks later a sudden increase of pain and swelling took place and the author operated through the vagina. The mass was a tubal mole in the left side.

Ten years later he was called to see the patient again. Her pain was intense, and vomiting referred to the appendiceal region, and toward the kidney; there was no hæmorrhage, swelling, nor rise of temperature. Even when a complete cast of the uterus was discharged after an amenorrhœa of about ten weeks, there was little bleeding. She had several attacks of pain and after nearly seven weeks consented to operation. A complete conception was found in the pouch of Douglas. The right tube was extended across the back of the uterus, and its fimbriated extremity held a quantity of placental tissue. The patient made a smooth recovery after removal of the tube and blood clots. She had one child nine years before the first ectopic.

C. H. DAVIS.

Chiene: A Case of Ruptured Very Early Primary Ovarian Pregnancy. *Edinb. M. J.*, 1913, x, 316.
By Surg., Gynec. & Obst.

The case here reported complies with the conditions laid down by Spiegelberg and by Williams but only partially conforms to Norris' demand that the tube on the affected side shall not only be intact but shall be microscopically free from evidence of gestation. Chiene did not remove the tube in his case as the patient's condition did not warrant unnecessary enucleation. The tube and the affected part of the ovary were in no way connected.

The patient was 34 years old, with an entirely normal menstrual history. Three days before admission to the Edinburgh Royal Infirmary she had been suddenly seized with severe abdominal pain, chiefly on the right side. Next day she took castor oil and felt better. On the fourth day the pain returned, persisting after an enema, and a diagnosis of appendicitis was made. There was no nausea or vomiting and no chills; temperature 99.40; pulse 120, small and feeble. The patient had had six children, youngest two and one half years old, but no miscarriages or previous pelvic trouble. The abdomen was slightly disturbed, tender all over, especially in the right iliac fossa, but no muscular rigidity. Vaginally, the great tenderness made findings doubtful. Rectally, tenderness was marked and distinct fullness was elicited in the pouch of Douglas. Exploratory laparotomy was performed and the peritoneal cavity was found to be full of blood, partly clotted, partly fluid. The right tube was normal but a mass the size of a cherry was found protruding from the uterine end of the right ovary, one half inch away from the fimbriated end of the tube. This ovary was removed. The left appendage was normal, as was the appendix. The uterus

was normal in size. Serial sections of the involved end of the ovary showed chorionic villi present in the blood clot. No embryo was discovered and in no section did the villi encroach on the ovarian stroma. No corpus luteum nor luterii cells nor decidua were seen. In all probability the pregnancy was one of either ten or twenty days' duration.

CAREY CULBERTSON.

Speidel: Eclampsia; With Report of Three Very Unusual Cases. *Ky. M. J.*, 1913, xi, 239.
By Surg., Gynec. & Obst.

The author reviews the recent theories regarding the cause of eclampsia, and discusses the various methods of treatment which are employed. He believes in venesection but in the first case which he reports, incision of the median basilic in both arms only resulted in the oozing out of 5 or 6 drops of tarry blood. The patient died one hour later. The blood pressure in this case was only 122 mm. hg. In his second case, the blood pressure rose to 212 mm. in October. The first week of December, the blood pressure was 218 mm. and induction of labor was advised. December 16, the patient could scarcely see, and the blood pressure was 232 mm. Labor was now induced by use of a large catheter. The child lived and the mother is improving. She had a severe eclampsia in her first pregnancy and was blind for nearly three weeks thereafter. The third case, a hæmophylic, had 22 convulsions December 16. A catheterized specimen of urine contained no albumen. Her blood pressure, after 15 convulsions, was only 135 mm.; the next day, 112 mm. and the third day, 94 mm. She lost the use of the left arm and leg on the third day. The cervix was dilated with a Voorhees bag and a premature child delivered by version. After 24 hours the woman had a blood pressure of 88 mm. Horse serum was given to aid in prevention of hæmorrhage.

C. H. DAVIS.

Nubiola: Cases of Atypical Eclampsia (Casos de eclampsia atípica). *Rev. de med. y cir.*, 1913, xxvii, 15.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Three interesting atypical cases of eclampsia follow: (1) Eclampsia 2 hours after labor; the urine, which was normal 6½ hours previous, contained 3½ per cent of albumin. There was slight œdema of the ankles. Within two hours there were six convulsions and from then on only traces of eclampsia. The patient recovered.

(2) Combination of epilepsy (which dated from childhood and was aggravated during pregnancy) and eclampsia during the second pregnancy. Forced delivery; exitus fatalis. The post-mortem examination showed a localized focus in the brain, the result of a former hæmorrhage. Unfortunately the anatomical changes which might be referable to the eclampsia were not given.

(3) Eclampsia with unusually severe convulsions, resulting in death 8 hours after the first attack and

during forced extraction. There was positively no trace of albumin in the urine three or four days before the attack.

SCHMID.

Bruce-Bays: Pyelonephritis of Pregnancy. *So. African M. J.*, 1913, xi, 116.

By Surg., Gynec. & Obst.

Bruce-Bays discusses the etiology, diagnosis, prognosis and treatment of pyelonephritis of pregnancy and illustrates the article with a case report. The diagnosis is based on the bacteriologic examination of the urine, which usually shows the bacillus coli to be the exciting agent. The bacilluria has a tendency to persist. If ordinary means of treatment fail to give results, an autogenous vaccine prepared from the urinary bacteria should be used. Finally the author mentions the fact that puerperal infections from pyelonephritis are uncommon. If pyrexia occurs during pregnancy, the former being associated with pains in lungs and back, one should think of the possibility of the presence of this disease. The induction of abortion or premature labor is never indicated, as a correct treatment usually permits the pregnancy to be terminated in a natural manner.

HENRY SCHMITZ.

Jacobi: Pulmonary Tuberculosis of the Pregnant Woman. *N. Y. St. J. M.*, 1913, xiii, 192.

By Surg., Gynec. & Obst.

The author outlines the prevention of conception and treatment of tuberculous women, and would prohibit marriage until the tuberculosis is cured. If married, he would prevent conception by the use of the condom or of vaginal injections of slightly acid substances immediately after coitus. As pregnancy in a tuberculous woman is a very grave danger, interruption has been recommended. The earlier this is done the lower the mortality. He does not advise the modern extensive operations, as for instance that recommended by Martin. The object of destroying the bacillus nest in the uterus could be accomplished by the use of intra-uterine irrigations of strong solutions of carbolic acid or potassium permanganate.

HENRY SCHMITZ.

Köhne: The Influence of Pregnancy, Labor and Puerperium on Tuberculosis (Ueber den Einfluss der Generationsvorgänge auf die Lungentuberkulose). *Beitr. z. Klin. d. Tuberkul.*, 1913, xxvi, 71.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author briefly reviews the literature of the subject for the last 10 years and reports twenty-two cases in which the effect of pregnancy, labor and the puerperium on the course of tuberculosis was carefully watched. In sixteen cases no detrimental influence was demonstrated; to some extent even an improvement was noticed. In seven cases a tendency towards wasting was observed during pregnancy, but the more advanced processes were not always detrimentally affected. Among the cases in which an unfavorable effect was noticeable, there were two in which the progressive character of the

tuberculosis did not manifest itself until nine to twelve months after the last confinement, so that the change for the worse could not positively be attributed to the effect of the pregnancy.

These favorable results are of considerable importance considering the fact that the involvement of the lungs was no longer in its incipency. Although only a small number of cases is presented, the author concludes that a prevention of conception is hardly to be advocated in phthisical subjects, and the induction of abortion is not indicated. On the other hand, nursing should be interdicted, and the acceptance of the tuberculous pregnant women into sanatoriums is urgently requested.

HARMS.

LABOR AND ITS COMPLICATIONS

Krug: A New Manipulation During Labor (Ein neuer Handgriff bei Entbindungen). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 412.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reviews the manipulation he had previously proposed because of the favorable results he obtained by this method in cases of protracted labor. The patient is placed on a table (or transversely in bed) with the buttocks brought near the edge; the legs are spread and flexed; the obstetrician then places the three middle fingers of his right hand against the inner surface of the right tub. ischii and the three middle fingers of his left hand in the corresponding location of the left tub. ischii; thus the hands are crossed at the wrists. During labor pains the six fingers, by means of the leverage of the crossed hands, make firm pressure in the direction of the transverse diameter of the pelvis, slightly lifting and widening the pelvis, thus making the passing of the head easier.

HERZOG.

White: The Contraction Ring as a Cause of Dystocia with a Description of a Specimen Removed by Hysterectomy During Labor. *Lancet*, Lond., 1913, clxxxiv, 604.

By Surg., Gynec. & Obst.

The author gives the following differential diagnosis:

CONTRACTION RING

1. A localized thickening of the wall of the uterus due to the contraction of the circular fibres over a point of slight resistance, most frequently over a depression in the child's outline or below the presenting part.
2. The uterine wall at the site of the contraction ring will therefore be thicker than it is either above or below.
3. The wall below is neither thinned nor distended.
4. The presenting part is not forcibly driven into the pelvis.
5. The child may be wholly or mainly above the contraction ring.
6. The body of the uterus above a contraction ring is usually relaxed and not tender.

7. Round ligaments are not tense.
8. A contraction ring may occur in the first, second, or third stage of labor.
9. A contraction ring does not vary in position as labor goes on.
10. A contraction ring is rarely felt on abdominal examination.
11. The patient's general condition is good.
12. Causation: premature rupture of the membranes; intra-uterine manipulations.

RETRACTION RING

1. The junction of the thinned lower uterine segment with the thick retracted upper uterine segment.
2. The uterine wall above the retraction ring is much thicker than it is below.
3. The wall below a retraction ring is both thinned and over-distended.
4. The presenting part is or has been jammed into the pelvis.
5. Part of the child must be below the retraction ring.
6. The body above a retraction ring is tonically contracted and hard.
7. Round ligaments stand out.
8. A retraction ring practically always occurs late in the second stage of labor.
9. A retraction ring gradually rises as retraction of the upper uterine segment proceeds.
10. A retraction ring may frequently be felt per abdomen.
11. The patient's general condition is bad.
12. Causation: obstructed labor.

The author discusses the causes and differential diagnosis. In the series of cases which he has studied, excluding laparotomy cases, there is a maternal mortality of 38% and a fetal of 63%. In 19 cases, treated by laparotomy, excluding one death from eclampsia, the mortality is 31.5 and 42%. He gives the history of three cases which came under his observation. He believes that expectant treatment is useless and drugs of little value. Cæsarean section is indicated where the ring is wholly below a living child, and it is preferable to embryotomy in the other cases if simple traction or manual dilatation fails and the child is alive. All extra-peritoneal Cæsarean sections are contra-indicated, and in septic cases the operations indicated are Cæsarean section followed by hysterectomy if the child is alive, or excision of the gravid uterus unopened if the child is dead. C. H. DAVIS.

Vogt: A Hæmatoma of the Abdominal Wall Developing During Labor (Über ein unter der Geburt entstandenes Bauchdeckenhämatom). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 493.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Stöckel's two cases are mentioned, these having developed through coughing spells during pregnancy and treated by incision and drainage. The author's case developed spontaneously during labor. This

seems to be the only case known. Some hours post-partum the patient complained of severe pain above the symphysis. Palpation revealed two symmetrical tumors at the insertion of the recti. The white line divided them and the tumors were probably in the rectus sheath. The size increased for three days, and then resolution began. The treatment instituted aided resorption. When the patient left the hospital on the twenty-first day, the tumor was still palpable. It disappeared four weeks later.

The etiology was obscure. There was no cough, lues or hæmorrhagic diathesis. There had been no infection, intoxication or trauma. In the differential diagnosis, the only other condition to consider is a double-sided paravesicular abscess. It is of value to medical jurisprudence to know that such a tumor may have a spontaneous growth.

PONFICK.

PUERPERIUM AND ITS COMPLICATIONS

Gibbons: The Etiology and Treatment of Puerperal Eclampsia. *Brit. M. J.*, 1913, i, 865.

By Surg., Gynec. & Obst.

The author gives a review of the types and possible causes of eclampsia. More than half of the paper is given to methods of treatment. His statistics are of considerable interest.

He draws the following conclusions:

First, that in spite of all the labor which has been spent upon investigations, nothing can be definitely stated about the cause of the disease, although everything seems to point to poison circulating in the blood. Second, without any doubt, recent statistics show that the best treatment is that of rapidly emptying the uterus (by the safest means) after the first few convulsions. Third, the greater the delay in carrying out this treatment after the onset of the first convulsion, the greater will be the danger to the woman and child. C. H. DAVIS.

McDonald: Puerperal Infection from the Gonococcus. *Am. Med.*, 1913, xix, 177.

By Surg., Gynec. & Obst.

McDonald reports a case of gonococcus infection after childbirth and he believes that this form of infection is much more common in maternity practice than is usually suspected. He found it present in ten per cent of cases of puerperal infection studied bacteriologically and believes that the percentage would, if carefully studied, amount to one third of all cases. The great difficulty up to the present time has been in obtaining free cultural growths of the organism.

In a series of seventeen cases reported the organism was seldom found before the fifth day. Of these, eight had a fever above 101° F. and twelve above 100° F. Both McDonald and Gurd have found that the association of gonococcus and streptococcus increases the virulence of both organisms.

However, gonococcus puerperal infection usually runs a mild course with a comparatively low grade

temperature. There is a tendency for this infection to result in purulent endometritis and to extend into the tubes and perimetrium.

An interesting phenomenon of gonococcus puerperal infection is that the children of these mothers exhibited nutritional and intestinal disturbances while being breast-fed during the acute stage of the disease. One third of the babies died and the rest were weak and ill nourished.

Under treatment, ante-partum douches of chlor-meta-kresol are advised when gonococcus infection is present. Burckhardt and Kolb in two series of 700 and 400 cases found that the morbidity in the douched cases was 6.5 per cent to 8.6 per cent in the undouched cases, and 7.7 per cent in the douched cases to 10.5 per cent in the undouched cases of the second series. All local treatment is inadvisable.

EUGENE CARY.

Harrigan: Intramural Abscess of the Puerperal Uterus. *N. Y. M. J.*, 1913, xcvi, 444.

By Surg., Gynec. & Obst.

The author reports in full a case which he treated by abdominal hysterectomy and tabulates 34 puerperal cases which he has collected from the literature. He believes that the recognition and acceptance of this condition as a distinct type of pelvic infection has been hindered by the difficulties in diagnosis and by the obscurity and complexity of its complications. In this condition the abscesses are usually single in number, lymphatic in origin, and mostly situated in one of the uterine cornua.

Two explanations have been offered. According to Championnière, the intra-uterine lymphatics converge toward the cornua. Also, as pointed out by Mercade, the embryonal prototypes of the uterus, the Müllerian ducts, occasionally persist in the cornual regions as vestigial structures. Possibly these two factors conduce to make this region additionally susceptible. The symptomatology is in no way special or peculiar. If the condition is suspected, open the abdomen immediately. If the abscess is small, it may be opened, cauterized, and drained. When it is large, perforated, and gangrene of the uterus imminent, supravaginal hysterectomy is indicated.

C. H. DAVIS.

MISCELLANEOUS

Wilcox: Head Injuries of the New-born. *Boston M. & S. J.*, 1913, clxviii, 568.

By Surg., Gynec. & Obst.

The author calls attention to the fact that autopsies on children dying shortly after instrumental delivery show a high percentage of meningeal lacerations. It is conservatively estimated, he states, that from 30 to 40 per cent of the children with forceps suffer more or less from intracranial hæmorrhage. The hæmorrhage centers are most frequent in the parietal or frontal regions, close to the longitudinal sinus. The next center in frequency is just above or below the tentorium, or in the tentorium itself.

When the blood clot is small, it is usually absorbed and no trouble remains, but when there is a continued oozing, and the circulation somewhat impeded, an intracranial local pressure is exerted, which in time causes œdema with a resulting general pressure. If the new-born child appears to be dead, and does not respond to the usual methods, intracranial hæmorrhage should be suspected. If the child breathes but gives signs of low vitality, the following symptoms would be suggestive of cranial pressure: undue protrusion of the fontanelles, pallor of the skin, deviation of the tongue, head drawn back, convulsions, impeded respiration such as Cheyne-Stokes, or respiratory irregularity in any form. If the child lives, other sets of nervous symptoms follow as it grows older. Early operation should be performed in all such cases.

C. H. DAVIS.

Schiffmann and Vystavel: The Internal Secretion of the Mammary Gland (Versuche zur Frage einer inneren Sekretion der Mamma). *Wien. klin. Wchnschr.*, 1913, xxvi, 261.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author gives a series of experiments on the internal secretion of the mamma. The extirpation of the mamma in guinea pigs has no influence on the length of pregnancy and labor, the author thus agreeing with Scherbach. Injection of mammin and mammary gland extracts in salt solution from cow's mammae caused abortion in pregnant animals, while in pregnant women, mammin alone or in combination with pituitrin had no such effect. Injections of mammary gland extract in animals not yet fully developed caused a retardation in the development of the ovaries and the testes. The conclusions are that mamma extract obtained from cattle has a retarding effect on the development of the genitals, especially the reproductive glands. The author does not know whether this is due to an internal secretion of the mamma but will publish later the results of experiments now in progress.

ENGELHORN.

Römer: Bacteriæmia in Abortions and Its Clinical and Theoretical Significance (Über Bakteriæmie bei Aborten und ihre Bedeutung in klinischer und theoretischer Beziehung). *Beitr. z. Klin. d. Infektionskrankh. u. z. Immunitätsforsch.*, 1913, i, 299.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The above work is from the Schottmüller clinic and is a result of blood cultures taken in one hundred and seventy-one abortions terminated by operative interference and twenty-two spontaneous abortions, part of which were infected, the others not. Of the one hundred and seventy-one cases artificially terminated, blood cultures in forty-seven remained sterile, twenty-nine of these being afebrile. The author ascribes the large number of positive cultures to the fact that the blood was taken immediately after the curettage and not during, or after, the chill. In those cases in which bacteria were demonstrated after the curettage, the blood cultures remained

sterile when taken after the chill. Thus the author concludes that the chill is caused by liberation of endotoxins and ascribes a strong bacteriolytic and germicidal property to the blood. Cultures were also positive in afebrile cases. Bacteriolysis occurred with varying rapidity, depending on the character of the germ. *Ærobic* staphylococci remained virulent in the blood for only one to one and one half hours, while the streptococcus erysipelatus was active for five hours. The appearance of the chill thus depends on the character of the organism. The following are the bacteria causing chills in the order of their frequency: *Bacillus phlegm. emphys.* (Fränkel), streptococcus erysipelatus, bacillus coli, streptococcus putridus, staphylococcus *ærogenes* and *ærobic*.

The most frequent cause of infections is the bacillus coli, both in pure culture and in combination with other organisms.

The bacteriæmia in abortions follows a mechanical flooding of the blood during curettage or spontaneous contractions of the uterus. Infection and intoxication always appear together, thus disproving the theory of pure toxæmia or sapræmia. The bacteriæmia after curettage depends on the thoroughness of the operation (being relatively rare after superficial scraping), to the character of the endometrium and character of the bacteria. In spontaneous abortions bacteriæmia may follow the pains due to the increased pressure in the uterine cavity, and through the opening of the portals of entry by the erosion of blood vessels, but not by the resorption of bacteria. Every febrile abortion should be immediately curetted. The bacteriological examination is of value as to the prognosis. Streptococcus erysipelatus and staphylococcus aureus in combination with *bact. phlegm. emphys.* offer a bad prognosis, the bacillus coli a good one. ZÖPPRITZ.

Corbett: The Excretion of Amylolytic Ferments in the Urine During the Toxæmias of Pregnancy. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 227. By Surg., Gynec. & Obst.

Corbett has investigated the content of amylolytic ferment of the urine in a series of toxæmias of pregnancy by the use of Wohlgemuth's method of quantitative estimation. As a result of the behavior of the urine to this ferment reaction in his hands, Corbett divides cases of eclampsia into two main groups: (1) primarily, the renal type where the toxine has some affinity for the renal epithelium, either following the typical albuminuria of pregnancy where the kidneys have been damaged for a comparatively long time, or as a more acute condition. Here one may expect low readings, together with much albumin. The diastase value of the serum may exceed that of the urine. Whether there may be a relative increase in the ferment content of serum or urine before eclampsia supervenes, he does not know. (2) Secondly, the renal type in which the damage to the kidneys is less important, the greatest changes being in other organs, such as

the liver and possibly also the pancreas. Here during the eclamptic period there will be a large percentage of albumin in the urine together with high diastase values for the serum and urine. In those rarer forms where there is no albumin and where there are no recognizable changes found in the kidneys post-mortem, an examination of the diastase content of the urine might yield interesting results, he thinks. He believes that further research in this line may yield something of value from the standpoint of diagnosis and prognosis. He suggests that because of the great variations seen in the diastase content that the pancreas may be in some way associated with eclampsia. N. SPROAT HEANEY.

Williams and Pearce: Abderhalden's Biological Test of Pregnancy. *Surg., Gynec. & Obst.*, 1913, xvi, 411. By Surg., Gynec. & Obst.

The use of Abderhalden's test for pregnancy, employing the dialysis method and the Ninhydrin color reaction has given positive results with each of 28 sera from pregnant women and eight from women in the post-partum period, including one abortion. The test has never been negative in a known pregnancy. On the other hand, the serum of pregnancy reacts with tissues (kidney, heart, uterus) other than placenta. Also sera of two cases of nephritis, one of tabes, and one of infection (carbuncle), and occasionally of some individuals in apparent perfect health have given the reaction with placenta and other tissues.

In the use of Abderhalden's dialysis method they have found the Ninhydrin reaction far superior to the biuret reaction. It is also important that Schleicher and Schull's smaller dialysis sacks be used rather than the fish skin membranes originally recommended by Abderhalden. Results as satisfactory as those obtained by dialysis are obtained by mixing tissue and serum in tubes and after incubating for 24 hours testing the filtrate obtained on coagulation by heat and acetic acid with Ninhydrin. Inactivation of the serum causes a great diminution in the degree of reaction but does not cause it to disappear entirely. At zero temperature no reaction occurs. The power to cause the reaction persists when the serum is kept under proper conditions of temperature for at least seven days.

As the result of their studies they feel that this test cannot be accepted as an accurate clinical method until it has been more thoroughly investigated and the possible sources of error corrected. This conclusion, however, applies only to Abderhalden's dialysis method and not to his optical method with which they have had no experience.

Van Erps: Hæmostasis in Obstetrics by Means of a Modification of Momburg's Method (*L'hémostase en obstétrique par le procédé de Momburg modifié*). *Clinique, Brux.*, 1913, xxvii, 17. By Zentral bl. f. d. ges. Chir.

The author describes Momburg's method briefly, then states the following history: A primipara, age

31, after forceps delivery necessitated by total absence of labor pains and the consequent danger of the child's life, suddenly was seized with a profuse atonic hæmorrhage. Hot douches and ergotin injections were ineffective, hence tampons were placed in the uterine cavity. There were no lacerations. Hæmorrhage ceased to all appearances, but in 45 minutes the author was hastily summoned and found the patient completely exsanguinated and pulseless. Manual aortic compression was done at once and this was followed by applying Momburg's elastic tube according to the author's modifications, viz., (1) a pad is improvised by folding several towels around a round box and laying this over the aorta. (2) Several (5 or 6) towels are carefully folded over this pad and then the rubber hose is tied around the body over this compress. The author believes his modification admits of firmer and more prolonged pressure than the Momburg method, and, since the elastic is not applied directly to the skin, there is less pain, the skin is not pinched, and the pressure is more localized.

HAUSER.

Sternberg: Deaths Occurring After Momburg's Hæmostasis and After Lumbar Anæsthesia (Im Anschluss an die Momburgsche Blutleere und an Lumbalanæsthesie aufgetretene Todesfälle). *Med. Klin.*, 1913, ix, 166.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A 39 year old woman, in whom a Momburg's tube was applied with good results because of a severe hæmorrhage after the delivery of the placenta, died five days later with peritoneal symptoms. Section showed a tear in the cervix 5 cm. long, extending into the parametrium; the surface of the uterine cavity covered with a putrid, stinking mass, stomach, entire small and large intestines enormously distended; superficial submucous hæmorrhages and small necroses at many points in the large and small intestines. There was no evidence of contusion of the intestines or kidneys. Abdominal aorta, vena cava, cœlic ganglion were negative. In the epicrisis of this autopsy finding the author thinks that there is no connection between the lethal peritonitis and the putrid endometritis and regards the peritonitis as a consequence of the high-grade meteorism. This meteorism may be explained on the basis of lesions of the splanchnic nerves produced by the Momburg's constriction, as other clinical and experimental observations have shown. Finally the author discusses six cases posted by him, in which lumbar anæsthesia had brought about the death of the patient. In five cases the death occurred suddenly during or after the operation and only in one case 18 hours after the operation. In one case a slight hæmorrhage was found in the pleural canal, not sufficient to account for the death; in two cases, a more markedly moist diffusion of the brain and spinal cord was determined; in three cases brain, cord, and meninges were perfectly normal. These cases occurred among 1,770 lumbar anæsthesias, the

proportion being 1:442. The statistics recently collected by Michelson show that deaths after lumbar anæsthesia are not all too rare, but vary widely as regards the proportion (Tomaschewski 1:17,847; Strauss 1:2574; Chiene 1:570; Hohmeier 1:200). The proper indications and choice of cases must, therefore, still be rigidly insisted upon.

KAYSER.

McDonald: Sterility in the Female, Its Etiology and Treatment; with Report of a Case of Instrumental Impregnation. *Am. Med.*, 1913, xix, 141. By Surg., Gynec. & Obst.

The author discusses in full sterility in the female and cites a case in which instrumental impregnation occurred.

The average interval between marriage and the first-born is seventeen months, and the probability of impregnation decreases thereafter. Only twenty-five per cent of women bear their first child after four years. Norris believes that presumptive sterility is established after two years.

The author states that "genital infantilism is the cause of almost all cases of sterility in women." Other rarer causes are ovarian disease, tubal disease, misplacement, perineal lacerations, lactation, thyroid disease, diabetes, tertiary syphilis, uterine tumors, imperforate hymen, vaginismus, etc.

Under infantilism of the vagina, Runge has shown that thirty-two hours after coitus, spermatozoa were found in the vaginas of three quarters of all fruitful women, while only one fifth of sterile women had spermatozoa remaining.

Endometritis and altered uterine and vaginal secretions are not thought to be important as a causative factor. The author also believes that the gonococcus is not a very important factor in sterility except occasionally in endocervicitis.

The prognosis depends upon the degree of infantilism.

Treatment: The treatment apart from isolated local causes is the treatment of the infantile uterus and vagina. The author advises the use of an alkaline douche to wash away the cervical mucus.

Sodii bicarbonatis, 1 oz.

Sodii carbonatis, 1 dr.

M. Sig: Douche daily with above in 2 quarts of warm water.

He also advises extract of corpus luteum, gr. v, t. i. d., p. c., to simulate the ovaries.

If the vaginal pouch is small it should be dilated by a proper pessary. The treatment of the uterus is dilatation of the cervix and of development. The latter may be induced by the use of electricity, the negative pole of a constant fifty milliampere current being introduced into the uterus two or three times a week. The cervix should be dilated with graduated smooth dilators and then a stem pessary introduced. The author claims this to be the most satisfactory treatment for sterility and congestive dysmenorrhœa.

Operations are suited best to the long, hard

conical cervix, with marked menstrual pain and congestion. Of these the author advises the Fenwick-Pozzi operation which he illustrates in seven steps in his article.

The instrumental impregnation was on a woman that showed all the characteristics of infantilism. The treatment was as follows: (1) alkaline douches; (2) corpus luteum diet; (3) semen was obtained in a condom and brought in a thermos bottle; (4) semen was diluted with Lache's solution; (5) then a glass syringe was filled and attached to a silver canula which was bent to conform to the curve of the uterus. The canula was then introduced into the cavity of the uterus past the internal os. After the second injection the woman became pregnant and was delivered of a normal child.

EUGENE CARY.

Hauch and Meyer: Pituitrin as an Aid to Expulsion, Especially in the Treatment of Placenta Prævia (Pituitrin als Austreibungsmittel, besonders bei der Behandlung der Placenta prævia). *Gynäk. Rundschau*, 1913, vii, 132.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The authors employed pituitrin in 65 obstetric cases without being able to report disadvantageous side reactions. They confirm the general experience that pituitrin is the more active the nearer it is given before the commencement of labor at the normal termination of pregnancy and the further labor has advanced. The exact indications are given based on a careful description of eleven of the more interesting cases. In seven cases of placenta previa lateralis which were treated by artificial rupture of sac and pituitrin it was demonstrated that normal labor occurred four times. Cases of central insertion probably demand other measures. The hæmorrhage tends to last for some time after rupture of the sac and after injection of pituitrin, so that this treatment is only to be recommended in the beginning of the hæmorrhage. This method of rupturing the sac and injecting pituitrin was used as well in three cases of premature detachment of the placenta. The result was excellent in two cases; in the third case, an abortion, pituitrin was negative in its action.

HOFSTÄTTER.

Knight: Hyoscine-Morphine and Pituitrin in Parturition. *South African M. Rec.*, 1913, xi, 89.

By Surg., Gynec. & Obst.

The author has used hyoscine and morphine in one hundred and forty-seven cases during the past three years. All but thirteen of these were abnormal labor in which he had been called after the patient had been in labor for some two or three days. He gives an initial dose of hyoscine gas $\frac{1}{160}$ and morphine gas $\frac{1}{4}$. The hyoscine may be repeated but not the morphine. This is given some two hours before the expected delivery of the child. He gives an intramuscular injection of tyramine, pituitrin, or ernutin after delivery as the uterus is apt to be lax. He has seen no ill effects and believes that the treatment will lessen the dread of parturition.

C. H. DAVIS.

Ebeler: Treatment of Urinary Retention with Pituitrin (Zur Bekämpfung der Retention urinæ durch Pituitrin). *Ztschr. f. gynäk. Urol.*, 1913, iv, 55.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

For the treatment of urinary retention and for the prevention of catheter cystitis, Ebeler advises the intramuscular injection of 1 cc. pituitrin. He also recommends it in all cases in which an injury to the bladder musculature has occurred or in which the contraction is hindered through injury to the bladder innervation. Conclusions based on forty-five cases, terminated by spontaneous deliveries, vaginal or abdominal operations, show that pituitrin has no influence on the empty bladder, but in cases of distention, pressure and a desire to urinate are manifested within a few minutes after the injection. The author injected the pituitrin from sixteen to thirty-six hours after the last urination. Its action varied in rapidity from ten minutes to several hours, but was lasting, so that a second retention rarely developed. Eight times he was forced to repeat the injection. No action was obtained in cases of cystitis due to an incarcerated pregnant uterus. The author believes that pituitrin stimulates the contraction of the bladder and that it acts as a diuretic and stimulant.

FRANK.

Daels: The Clinical Action of Electrargol (Über die Wirkung des Electrargols Clin.). *Zentralbl. f. Gynäk.*, 1913, xxxvi, 329.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

When highly virulent organisms are inoculated into guinea-pigs no effect was obtained, but in using less virulent bacteria, a directly favorable or indirectly protective action must be attributed to electrargol. No bactericidal action was demonstrated. An antitoxic action was manifest in vitro, analogous to diphtheria antitoxin, but in vivo only with the intravenous injection. With subcutaneous or intraperitoneal injection there was no increase in leucocytes, but with intravenous injection these increased 100 per cent and over. Leucocytosis develops within six hours, but upon repetition after a short interval no further increase is observed. Upon repeating the injection after three or four weeks, the increase in leucocytes sets in later but is more lasting. The venous injection of large doses at intervals of several days is to be preferred.

Its use in the clinic was confined to eight cases of fever following delivery or abortion and was given by intravenous injections of 30 to 140 cc. at a dose. In several cases brilliant results were seen, in others less decided, while in one severely infected case with peritonitis there was only a transient improvement in the general condition. The expected leucocytosis developed in one case only. In one case, after an injection of 120 cc., the temperature rose, with slight cyanosis and cough. Daels advises the intravenous injection to improve the general condition of the patient. Its influence on temperature is decided, however it is not a simple antipyretic ac-

tion. A favorable effect obtained after one injection will sometimes last for several weeks. Electrargol given intravenously confers a powerful protection upon the body and permitted the author to treat the infection much more energetically. WAGNER.

Von Boltensern: Pantopon (Über Pantopon). *Abhandl. a. d. Ges.-Geb. d. prakt. Med.*, 1913, xiii, 93. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Von Boltensern gives a detailed compilation of seventy-one articles, thirteen of which treat of the effect of pantopon in gynecology and obstetrics. Pantopon, eventually combined with scopolamine, diminishes the pains during labor but has no effect upon the birth act. For the child's sake not more than two injections should be given. At the first injection the os uteri should be the size of about a silver dollar. During expulsion the effect is doubtful, and the application is contra-indicated in operative deliveries. HAPFICH.

Rachmanoff: Method of Non-Ligation of the Umbilical Cord (Methode des Nichtabbindens der Nabelschnur). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 459. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The method was applied in ten thousand cases. After the delivery, the child's respiration as well as the pulsation of the cord was carefully observed. When the cord is pulseless, it is cut without preliminary ligation; normally there is no hæmorrhage. The advantages of this method are: rapid mummification of the stump and falling off of the same later than usual. The indications for ligating the cord are: hæmorrhage from the cord, asphyxiation of the child, and bleeding on the part of the mother.

GINSBURG.

McDonald: A New Obstetrical Forceps. *Am. Med.*, 1913, xix, 163. By Surg., Gynec. & Obst.

The author advocates the use of a forceps with shorter blades and one which will distribute the force more evenly over the head which the present day forceps do not do.

With the idea of remedying these defects and including the advantages of both the Elliott and the Tucker-McLane forceps, he has devised a pair of forceps which have as their basis a solid blade into which a number of slits, windows or fenestræ are cut. The blades are shorter than either of the other models and the width between the tips the same as the Elliott.

The multiple fenestræ do not detract from the strength of the forceps nor from the ease of application. The principle is that of distribution of pressure and traction by several friction points instead of one as the Elliott, or a smooth surface as the solid-bladed Tucker-McLane.

As a result of the non-slipping quality, there can

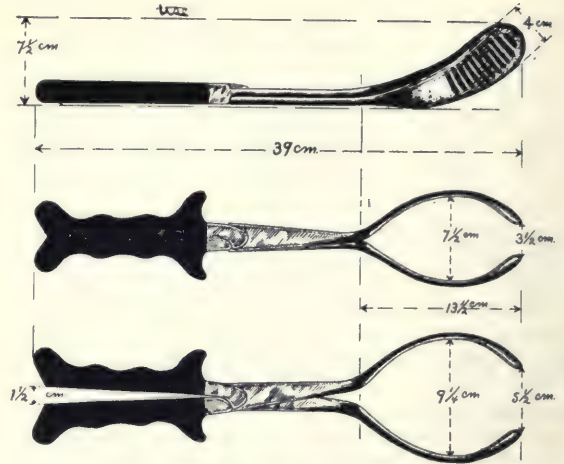


Fig. 1. (McDonald.) Author's semi-fenestrated forceps with multiple traction bars.

be certain changes in the blade which are desirable. The blades may be shorter so as not to pinch the cord, nor to make too much pressure over the facial nerve, to make them easy to apply, and to remove, and to make the operation of rotation of the head from R. O. P. a simple one. They do not extend beyond the head and cause tears. They do not slip. The semi-fenestrated forceps will not cut off any ears nor are they likely to cause facial paralysis.

They have been in use with the multiple fenestræ since 1905. The shortness and narrowness of the blade makes it so easy to apply them that they may be more often applied to the sides of the head than other forceps. EUGENE CARY.

Lieven: On the Action of Hypophyseal Extract (Zur Wirkung des Hypophysenextraktes). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 337. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This is a report of an unfavorable course of labor after the use of pituglandol. The parturient was 37 years old and at full term. She had had five normal labors. One cc. of pituglandol was administered subcutaneously on account of weak pains ten hours after rupture of the amniotic sac. The pains became stronger in ten minutes and long continued uterine contractions were obtained after forty-five minutes. The foetal heart sounds varied from 82 to 100 following these pains and there was some expulsion of meconium. Under chloroform anæsthesia forceps were immediately applied to the head, which stood at the pelvic inlet. A very large child, deeply asphyxiated, was extracted and resuscitated. The uterus contracted well without hæmorrhage. Lieven warns against considering the hypophyseal extract as a harmless agent. HAPFICH.

GENITO-URINARY SURGERY

KIDNEY AND URETER

Ohlmacher: The Bacteriology and Bacteriotherapy of Renal Calculus and Its Sequelæ. *J. Am. M. Ass.*, 1913, lx, 1213. By Surg., Gynec. & Obst.

The author, in this article, calls attention to a fact that has been long recognized, but which is of interest, namely, the concurrence of bacteriuria and urinary calculi. In reviewing the literature of bacterial therapy, he claims to have found no report, with the exception of three cases of Wright's wherein the treatment of calculous bacteriuria and pyuria has been undertaken by means of autogenous bacterial vaccines. His case reports are incomplete, inasmuch as, despite the fact that the clinical manifestations disappear, the patients pass out of his hands before he succeeds in demonstrating the urine to be free from organisms. He concludes by stating that from the point of view of symptomatic relief, especially in the matter of distressful micturition and the accompanying failure of general health, he has been most favorably impressed in treating the sequelæ of renal calculus by the method of autogenous vaccine therapy. However, in several instances he still found the offending bacteria in the urine, though present in greatly reduced numbers, even when a strict symptomatic recovery had been achieved. "It is especially on this account, I believe, that a conservative attitude should be maintained relative to the possibility of preventing nephrolithiasis by bacterial vaccine treatment."

In conclusion, he states that therapeutic immunization with autogenous bacterial vaccines should be attempted in non-operative cases of calculous pyuria and bacteriuria, for the relief of bladder irritability and impaired general health, and in the operated cases when these symptoms persist. IRWIN S. KOLL.

Lower: Conservative Surgical Method in Operating for Stone in the Kidney. *Cleveland M. J.*, 1913, xii, 260. By Surg., Gynec. & Obst.

Lower calls attention to the fact that more renal calculi are being discovered in recent years than formerly, a matter which he ascribes to the newer and more efficient means of diagnosis at the disposal of the surgeon. He also points out that there are many other causes of renal colic besides calculus — any condition which produces an hydronephrosis from mechanical obstruction. The interpretation of X-ray plates where shadows in the course of the ureter simulate calculus is a matter which should be referred to the expert. Conversely, certain calculi have not shown in X-ray plates taken by experts, but were passed later by the patient.

The author discusses three operations:

1. Nephrotomy is not to be recommended on account of the following dangers: hæmorrhage, persistent urinary fistula, recurrence of stone, and the effect of prolonged suppuration of one kidney upon its fellow.

2. Pyelotomy is the operation of choice in cases where the calculi are in the pelvis or calices of the kidney and where the kidney tissue has not been greatly damaged by infection. The operation is easier and simpler than nephrotomy and there is less damage to the kidney. The wound in the pelvis may be closed by suture or left open, and there is little danger of urinary fistula.

3. Nephrectomy is the operation of choice in cases of unilateral multiple calculi with severe infection. Statistics show that the mortality following primary nephrectomy for cases of this sort is lower and the convalescence much shorter than in nephrotomy.

The cases requiring the nicest judgment are those of bilateral calculi. Nephrectomy is generally not to be considered; neither should nephrotomy, if it be at all possible to remove the stones by way of the kidney pelvis.

Eisendrath: Pyelotomy for the Removal of Renal Calculi. *J. Am. M. Ass.*, 1913, lx, 1145.

By Surg., Gynec. & Obst.

The removal of renal calculi through an incision in the pelvis of the kidney has several important advantages over removal through an incision in the kidney substance in a large percentage of the cases of nephrolithiasis. In using the pelvic route, however, one must bear in mind the relation of the renal vessels to the pelvis of the kidney, and must also consider the fact that there are several distinct types of pelvis, which present varying difficulties in the extraction of stones.

While the anterior surface of the kidney is covered with a network of vessels, the posterior surface is avascular with the exception of a few small veins, whose presence may be ignored, and a single artery, a branch of the artery to the superior pole of the kidney, which courses downward across the pelvis, commonly within the hilum, and therefore out of harm's way. There is generally a venous loop about each of the calices. The pelvis itself may be large and capacious, of the ampullary type, or may be bifid, or otherwise subdivided. Ampullary pelves are the most numerous (70 per cent in the author's experience) and are the most easily dealt with; on account of the small size of its subdivisions it may be very difficult to remove a calculus from a bifid pelvis.

The X-ray is of considerable value as a means of

determining the position of the stone in the kidney, and some idea may often be formed with its aid of the accessibility of a stone by the pelvic incision, but it is upon the palpation of the kidney after it has been delivered that the form of operation must finally be determined. While very large and very deeply placed stones have been removed by pyelotomy, the advisability of the operation in such cases is very doubtful.

The author first inserts two fine sutures in the pelvis to act as tractors. The incision is made longitudinally between these sutures with a knife, and is enlarged with fine scissors. The finger can then be introduced and the kidney palpated bimanually. It is very much easier to locate a stone in this manner than when external palpation alone is employed. In removing calculi great gentleness is essential to avoid traumatism to the vessels lying within the hilum. Except in infected cases the wound in the pelvis is closed with 00 chromic gut sutures.

Comparison of nephrotomy and pyelotomy: Nephrotomy is preferable in cases in which there is a large branched calculus filling the renal pelvis, or in which there are many small calculi lying scattered throughout the kidney in closed cavities; it is to be chosen in infected cases in which there is more or less destruction of the parenchyma; it is the safer operation when the renal pedicle is short, or when there are extensive perinephritic changes; and it may be chosen when it is desirable to note the condition of the parenchyma of the organ. However, the danger of hæmorrhage, both primary and secondary, is very much greater in nephrotomy than in pyelotomy; calculi are more easily overlooked, as thorough palpation is more difficult; and there is some danger of necrosis of the parenchyma.

Pyelotomy, on the other hand, is the simplest method for the removal of calculi lodged at the juncture of the ureter and pelvis, or for calculi of moderate size in the ampullary type of pelvis or in a primary calix of a pelvis of the bifid or trifid type; it is the best method for calculi in the pelves of horseshoe kidneys, and in bilateral nephrolithiasis, especially when complicated by anuria; hæmorrhage is unlikely; bimanual palpation of the kidney is available; and the operation can be performed rapidly and is followed by a short convalescence.

S. W. MOORHEAD.

Wilson: The Embryogenetic Relationships of Tumors of the Kidney, Suprarenal, and Testicle. *Ann. Surg.*, Phila., 1913, lvii, 522.
By Surg., Gynec. & Obst.

Wilson considers the more minute embryologic anomalies which concern the development of these tumors based on a study of: renal tumors, 92; adrenal tumors, 3; testicular tumors, 21. He cites Huntington's Harvey lecture of 1907 for a summary of the gross anomalies of the genito-urinary tract, and supplements his own material by a study of the human and comparative embryology of the regions.

He calls attention to the chain of relations, to which new links have recently been added, between the development of the organs in question and their pathology. The urogenital system presents more anomalies than any other set of organs in the human body. Nature in the development of these organs pursues an indirect and wavering course, first developing them in the embryo to a stage in which, like the mesonephros or Wolffian body, they present an appearance of being capable of active function, then only to degenerate and have their remains utilized for the building of new structures as the permanent kidney and testis.

RENAL TUMORS: total 92. There were 3 pelvic papillomas, 4 carcinomas, 1 squamous-celled epithelioma, 1 adenoma, 1 fibroma, 7 sarcomas, 1 Wolffian tumor, 3 embryomas (Wilm's tumors), and 71 mesotheliomas. For considering their embryological relationships, he groups these into (a) tumors of the pelvis and collecting tubules, (b) tumors of the cortex, and (c) tumors of the capsule.

(a) Tumors of the Renal Pelvis. Most of the tumors of the renal pelvis—papillomas and carcinomas—apparently arise secondarily to chronic irritative processes of the adult pelvic epithelium. Two of the four carcinomas were demonstrably superimposed upon extensive renal calculus formation. One tumor, apparently of embryogenetic origin, a squamous-celled epithelioma resembling histologically a cancer of the lip, was evidently derived from the ectoderm. The explanation of the presence of ectoderm within the renal pelvis is as follows: The primary excretory duct enters the cloaca low down on that structure at a point close to its rectal portion. Before the opening occurs, however, the lumen of the cloaca may be seen to evaginate into the blind end of the primary excretory duct. Thus, though the primary excretory duct is normally composed entirely of mesoblast, there is a possibility, as an abnormality, of ectodermal cells from the rectum being carried into its lower end by way of the cloacal wall.

(b) Tumors of the Renal Cortex. Primary carcinomas and spindle-celled sarcomas of the adult renal cortex are rare. More often the point of origin of such tumors is in the pelvis, collecting tubules, or capsule. Most of the renal tumors which have been diagnosed as sarcomas are mesotheliomas—Wilm's tumors—derived from inclusions of the lateral embryonic plates within the caudal portion of the nephrogenic cord in the early embryo. By far the most numerous tumors of the kidney are the mesotheliomas (so-called hypernephromas or Grawitzian tumors) of the renal cortex. Of the 92 renal tumors 71 were mesotheliomas—78 per cent. He urges the hypothesis that these so-called Grawitzian tumors are not of suprarenal origin at all, but are mesotheliomas (nephromas); that they are elaborated from masses of nephrogenic tissue which have never become connected with the renal pelvis and which have never attained adult type in either form or function.

(c) Tumors of the Renal Capsule. Most of the few true sarcomas of the kidney develop primarily in adult tissue of the renal capsule and involve the cortex secondarily. The renal cortex is frequently the site of inclusions from the mesonephros and rarely of inclusions from the suprarenal gland. Rarely, if ever, do either of these inclusions in the renal cortex form malignant tumors. Why should adrenal rests, though comparatively rare in the kidney, produce hypernephroma, the commonest renal tumor, while adrenal rests in other localities, though comparatively common, so rarely produce tumors, either benign or malignant? (Glynn).

ADRENAL TUMORS: Of the three primary tumors of the adrenal studied, one was an adenoma and the other two hypernephromas of the adrenal cortex. Primary malignant tumors of the adrenal are either round-celled sarcomas or more frequently hypernephromas arising from the adrenal cortex. Adrenal hypernephromas frequently induce abnormalities of sex and strength. Tumors of the adrenal, in whatever stage of their development, bear no histological resemblance to most mesotheliomas (so-called renal hypernephromas).

TESTICULAR TUMORS: total 21. Two were explored only, each apparently a sarcoma of an undescended testicle. All of the other 19, which were studied in histologic detail, were teratomas. The history and histology of these was in harmony with Ewing's hypothesis, that teratomas of the testicle arise from sex-cells whose normal development has been suppressed. The difference in time of development of the embryonic crop of genitaloid cells and the next generation which appears at puberty may account for variations in structure and *tempo* of the testicular teratomas. Six of the 19 cases gave a history of injury definitely related to the onset of symptoms in the injured testicle.

Joly: Three Unusual Cases of Renal Tumor; with a Discussion of the Operative Treatment of the Condition. *Proc. Roy. Soc. Med.*, 1913, vi, 186. By Surg., Gynec. & Obst.

These cases of hypernephroma are reported because of the predominance of hæmorrhage, as a symptom, over pain or other features of the disease. The first case was interesting on account of a dark-colored mass, seen on cystoscopy, projecting from the ureter, which the author thinks may have been an extension from the growth in the kidney, but he does not prove it not to be blood clot. In the second case, the renal hæmorrhage was so severe that the bladder became filled with clot enough to cause retention for eight hours. The bladder was distended to within one inch of the umbilicus, so that evacuation with a Bigelow instrument was necessary. The author believes that such severe bleeding from a renal condition is most unusual.

In discussing the operative treatment of malignant renal tumors the author points out that today, with our knowledge of the malignancy and tendency to form metastases, partial nephrectomy is

no longer justifiable. Moreover, simple nephrectomy—i. e., the operation performed for non-malignant renal tumors—is not sufficient on the ground that metastasis begins early, tumor cells rapidly spreading through the lymphatics into the para-aortic glands and into perirenal fat through adhesions between this and the surface of the tumor. He believes the only adequate and thorough method of dealing with these tumors is radical removal of the kidney within its fatty capsule, as recommended by Grégoire. In this procedure the dissection is carried on outside of the perirenal fascia of Zuckerkandl, so the kidney and surrounding fat are freed *en masse* down to the pedicle: here the para-aortic glands are to be looked for and dissected out.

He advocates a T-shaped incision, allowing both exploration of the abdomen, to determine presence and extent of metastases, and approach to the tumor through the loin. The paper was discussed by Swan and Kidd who reported similar cases, and emphasized painless hæmaturia as an early symptom of tumor of the kidney. HORACE BINNEY.

Eisendrath: Tuberculosis of the Kidney. *Interst. M. J.*, 1913, xx, 299. By Surg., Gynec. & Obst.

The author calls attention to the fact that tuberculosis of the kidney is a far more common disease than is frequently thought. From a study of nearly fifteen hundred operated cases, including a number of his own, he has found that one kidney was affected in over 90 per cent of the cases, and that when the diseased kidney was removed early the operative (that is, the immediate) mortality was a little over two per cent, and the late or remote mortality (first five years) was not much higher. These cases also show that hygienic and non-operative measures are very apt to result in failure in the cure of tuberculosis of the kidney as compared to the operative treatment.

The mode of infection and the pathology of kidney and ureter tuberculosis is then discussed.

Involvement of the opposite kidney and ureter always takes place along the route of the opposite ureter; that is, by the ascending or urogenous mode. Bilateral infection of both kidneys through the blood current may occur, but it is extremely rare. Tuberculosis of the kidney may be complicated by ordinary pus micro-organism infection. There exists a certain group of cases known as closed tuberculous pyonephrosis, in which extensive infection may occur in the kidney. Another important form of tuberculous change in the kidney is that which occurs after narrowing of the ureteral lumen, with retention of contents and the production of a typical hydronephrosis. The relation of the gonococcus to tuberculosis is undoubtedly that it prepares the field for the tubercle bacillus, and many cases are due to a preceding gonorrhœal infection of the ureter and renal pelvis. An earlier diagnosis must be made if the operative results are to be improved. The following classes of cases are encountered: Those in which the bladder symptoms predominate;

those where the vague pains over the kidney with pus in the urine and gradual loss of weight and strength are present; those with pyuria and marked rise in temperature—these are usually cases of mixed infection; those with sudden initial hæmaturia; next, those presenting as the chief symptom a renal tumor without any symptoms—the closed tuberculous hydro- or pyonephrosis cases; and, finally, those cases in which a perinephritic abscess of unknown origin occurs.

The question of diagnosis and examination, including cystoscopy and ureteral catheterization, is discussed.

The X-ray is of little value unless the so-called putty kidney is present. The shadows thus obtained may simulate the presence of stone. Calcification of a tuberculous area in any portion of the kidney may also simulate stone.

In regard to treatment, the author believes that the non-operative method is applicable to but few cases. He quotes the statistics of Wildbolz, in which apparent cure only occurred in a small proportion of 316 non-operated cases. The statistics of 1,023 nephrectomies collected by Israel show that 75 per cent were permanently cured. This emphasizes the importance of making a diagnosis before the other kidney is involved, and also shows the great value of the operative treatment.

Finally the method of operation procedure which he uses is detailed.

Alger: Common Ocular Changes in Nephritis.

Post-Graduate, 1913, xxviii, 331.

By Surg., Gynec. & Obst.

The author states that characteristic ocular symptoms are not invariably present in nephritis. While Bright's disease is often first discovered by the oculist, a larger number of cases show no ocular signs whatever. Three classes of symptoms are recognized: First, those due to toxæmia; second, those due to vascular changes; third, those resulting from general weakness.

The commonest and most characteristic ocular symptom of nephritis is the so-called "albuminuric neuro-retinitis" which may occur in patients with little or no albumin. In nephritis of pregnancy, partial atrophy and permanent damage to the macular region may result from comparatively slight involvement of kidneys, while total blindness results in 25 per cent of the cases. Premature labor should be induced if retinitis develops before the seventh month. In chronic interstitial nephritis the fundus picture is characterized by the vascular changes associated with the general arteriosclerosis.

Prognosis as to vision depends upon the location of the lesions, as well as upon character and extent. Those due to toxæmia are most favorable. In other forms the appearance of retinitis is the most ominous both as regards vision and life. From 60 to 80 per cent in a long series of cases died within one year, and the percentage of total blindness was very large.

Chronic nephritis, with resulting high blood pressure, is probably a predisposing cause of glaucoma. The errors of vision due to muscular weakness are often relieved by rest and proper glasses.

THOS. C. HALLOWAY.

Underhill: Intermittent Pyuria Due to Infection of the Prostatic Utricle. *J. Am. M. Ass.*, 1913, lx, 1073.

By Surg., Gynec. & Obst.

Underhill reports two cases of infection of the prostatic utricle with intermittent attacks of pyuria, and calls attention to the importance of differentiating such cases from conditions higher up in the urinary tract, which present the same phenomena. Both cases presented a history of gonorrhœa, one six and the other eight years previous, and at irregular intervals for several years showed pus in the urine for several days. In one case these attacks were accompanied by frequency of micturition, and in the other by a sense of fullness in the perineum, and an aching in the testicles, but by no frequency of micturition. On examination both cases showed normal conditions in the bladder, ureters, prostate, and vesicles. The urine drawn from the ureters and bladder was clear. The prostatic and seminal fluids were normal. The pus examined microscopically showed pus cells but no organisms. By the three glass test, the urine was turbid, showing pus, in all three. Endoscopic examination of the posterior urethra showed the veru-montanum to be swollen, cedematous, congested, and easily bleeding. The lips of the utricle were glued together and when forced apart by a probe allowed the escape of pus. The utricle was emptied of its pus and a 1 per cent of silver nitrate solution applied daily for a few days, with excellent results in one case, and the formation of adhesions of the utricular lips in the second. The application of 1:1000 liq. formaldehydi completed the cure of the second case.

The author mentions Geraghty as having called attention to recurring attacks of posterior urethritis as one of the results of infection of the prostatic utricle. In the cases reported the interesting points are the intermittent attacks of pyuria, lasting a few days, with symptomless intervals, and the similarity shown in these symptoms, to those occurring in tuberculous and other infections of the upper urinary tract.

H. J. POLKEY.

Caulk: Unilateral Renal Hæmaturia Cured by Pelvic Injections of Adrenalin. *Interst. M. J.*, 1913, xx, 348.

By Surg., Gynec. & Obst.

The author states that, in contradistinction to the prevailing idea that bleeding may originate from a nephritis which shows no clinical evidences of the disease, he has cured two cases of unilateral bleeding by pelvic injections of adrenalin 1 to 2000. Both cases demonstrated clinical evidences of nephritis which evidently took no part in the production of the bleeding. Still in the two cases reported the catheterized specimens from the kidneys upon

analysis showed albumen and casts. By reason of the excellent results the author obtained in these two cases he makes a strong plea for conservatism in urging renal decapsulation as a method of relief and warning the profession against immediate radical measures in these cases until pelvic injections of adrenalin be tried first as a means of differentiation. In the two cases cited, he believes that the lesion responsible for the bleeding was undoubtedly in the renal pelvis, but whether it was a varicosity, an erosion or a papillitis, he is not prepared to say.

He is thoroughly convinced that many of the cases are due to nephritis but also believes many of the cases are due to renal pelvic lesions, and these should at first be proved or disproved by injection of adrenalin before any radical measures for the treatment of nephritis, such as decapsulation, are undertaken.

It would be of interest if the author would keep in close touch with these cases to find out if any subsequent bleeding takes place and possibly later on find out the lesion responsible for such a hæmaturia either by operative procedure or otherwise.

C. R. O'CROWLEY.

Pousson: The Future of the Nephrectomized.

Am. J. Urol., 1913, ix, 113.

By Surg., Gynec. & Obst.

The author raises the question:

"If the single kidney of a nephrectomized person generally suffices to assure him of the urinary function during normal conditions of health, will it do the same in certain physiologic conditions as pregnancy, or in pathologic states as in an infectious disease, or even after a simple organic disturbance, such as operative or accidental trauma?"

These points are considered under the following heads.

I. ANATOMICAL AND FUNCTIONAL MODIFICATIONS SUPERVENING IN THE KIDNEY REMAINING AFTER NEPHRECTOMY

These modifications cannot be indifferent to the future pathology of the remaining kidney. First, the compensatory hypertrophy which is never wanting either in man or nephrectomized animals. In this compensatory hypertrophy there is no formation of new glomeruli and tubules but simply an increase in the volume of those pre-existing. The process simulates an early stage of nephritis and consists of a proliferation of the parenchymatous elements to a greater extent than the interstitial. The modifications in the secretions of urine consist at first in a diminution of the quantity, the amount falling from one half to one third for the first three or four days, then rapidly increasing and exceeding the normal. There is present a small trace of albumen, and, in the sediment, leucocytes, casts and renal epithelium. These changes in the urine correspond to the anatomical lesions and show the presence of a true parenchymatous and interstitial nephritis.

This nephritis is due to the action of toxic substances accumulating in the blood upon the suppression of one kidney before the other can get into condition where it can take them off. The limitations of the inflammatory process are doubtless due to the relatively feeble toxicity of the blood and the rapid restoration of the field of elimination of the incited kidney. The foregoing occur experimentally and are also true clinically when nephrectomy is practiced for renal trauma.

"Are they equally applicable when this operation is undertaken for an affection, acute or chronic, suppurative or non-suppurative, diathetic or non-diathetic, recurring later in the congener or else attacking it at the same time as the first?"

Observations prove that this is so. A toxic nephritis follows different diseases of the kidneys but is no contra-indication to operation; on the contrary, the nephritis clears up after the removal of the diseased kidney, provided the process has not advanced too far and the organism is not itself too much intoxicated. Just as in the well kidney, the diseased kidney becomes the seat of compensatory hypertrophy. In many subjects, hypertrophy of the remaining kidney has already developed before the removal of the diseased organ, thus offering the urinary secretion a substitute field already prepared for work. This hypertrophy varies in different conditions; in uronephrosis, where there is a gradual and aseptic atrophy of the kidney, hypertrophy is complete and is comparable to that which follows experimental nephrectomy. Aseptic lithiasis is accompanied by a real, although slight, hypertrophy. In pyonephrosis, tuberculosis and cancer, it is slight.

"Are the modifications observed in the remaining kidney during the interval following nephrectomy permanent, and does the kidney indefinitely retain this advantage so that it may assure the process of urinary secretion in all its integrity?"

There are but few histological studies of the remaining kidney recorded, but these all show the increase in volume relates to the glandular rather than the interstitial tissue showing a permanent and true hypertrophy.

Chemical and histological examination of the urine as well as the various functional tests with methylene blue and other substances show in a majority of cases a complete return of renal function. This is equally true when the nephrectomy has been performed for disease, such as pyonephrosis, tuberculosis or lithiasis, as for conditions which do not affect the anatomical elements, as traumatism.

But this is not always the result and in a fairly large number of subjects one can find for many years persistent urinary troubles both quantitative and qualitative, these lesions being less the result of the toxic nephritis than of the lesions with which the kidney was itself affected at the time of intervention. The age and intensity of these changes explain their persistence, but, except in those cases where the original disease attacks in turn the remaining kidney, they tend to remain unchanged.

Clinical observation shows, despite these alterations in the urine indicating a kidney lesion, that a nephrectomized person can live for years without any aggravation of these conditions and may even overcome various diseases—still his resistance is undoubtedly diminished.

Thus from the study of the kidney function, nephrectomized patients are divided into two groups: (1) Those who entirely recover their physiologic function and (2) those who retain more or less definite disturbances of these functions. The latter are in the minority.

II. VALUE OF THE SINGLE KIDNEY FROM THE POINT OF VIEW OF PURIFICATION OF THE BLOOD IN THE VARIOUS PHYSIOLOGIC AND PATHOLOGIC CONDITIONS.

Resistance of the single kidney to intoxications and infections. There are many instances which show that unless the remaining kidney is badly diseased, nephrectomized persons stand infections on the whole very well.

Effects of nephrectomy on the general health and on the development of the individual. In suppurative lesions, acute and chronic, nephrectomy by removing the source of sepsis and permitting the remaining kidney to recuperate its functions restores general nutrition and causes actual resurrection in a few weeks. The influence of nephrectomy on the development of the individual when performed in adolescence or infancy seems to be nil, as is attested by various reported cases.

Pregnancy; complications following confinement; nursing. Nephrectomy seems to have no effect on the development of pregnancy and many normal cases are reported, not only single but successive. The published case, however, gives no information as to the anatomical and functional state of the kidney but it is probable that its condition was normal. When there is present the slight nephritic lesions already referred to there is undoubtedly more danger, particularly if some intercurrent infection adds its toxins to those of pregnancy.

Abnormal and septic labors would undoubtedly offer considerable danger in women with one kidney; but this is theoretical, as none such are recorded. Nursing is no more interfered with by nephrectomy than is pregnancy.

Trauma, Operations, Anæsthesia. Trauma: with the exception of the sudden death of a nephrectomized patient due to accident, there are no instances to determine the resistance of such an individual to accident. It is arguable that in cases of severe shock, due to lacerated wounds or burns, the already grave prognosis would be aggravated.

There are a large number of observations which prove that even the most serious surgical operations can be successfully performed on patients possessing but one kidney. Such operations should only be undertaken after one is assured of the proper functions of the kidney, and due care is to be observed during the operation and at subsequent dressings

as regards the employment of any antiseptic whose absorption might cause renal irritation.

Anæsthesia: individuals possessing but one kidney can be submitted to anæsthetic inhalation without danger, due regard being had for the functional ability of the kidney.

Medot: The Technique and Results of Lateral (Paraperitoneal) Nephrectomy. *Am. J. Urol.*, 1913, ix, 177. By Surg., Gynec. & Obst.

Lateral nephrectomy is considered to be better than the anterior transperitoneal operation because the peritoneal cavity is not opened; because it is easier to push the entire peritoneal sac toward the median line than to keep a mass of intestines out of the operative field; and because by the lateral route the operative field is closer to the surface of the body. Over the commonly employed lumbar route it has the advantage of better exposure of the kidney pedicle, so that the necessary manipulations can be carried out under the guidance of the eye. Its chief disadvantage lies in the danger of post-operative hernia on account of division of the eleventh intercostal nerve; yet of eighteen cases operated upon by this method eight were found to have a perfect cicatrix, while the remaining ten presented a slight impulse on coughing.

Operative technique: The patient lies on his back slightly turned toward the healthy side, a sand-bag being placed beneath the affected side so as to throw the lower portion of the thorax forward. The incision starts at the point where the anterior axillary line crosses the costal margin, and is carried downward and forward to a point about one inch in front of the anterior superior spine of the ilium. The external oblique is split in the direction of its fibres; the internal muscles are cut across. If more room be required the mesial portion of the external oblique may be cut transversely. The peritoneum is then stripped forward and a long retractor inserted to expose the renal region. The fatty capsule of the kidney is then opened and the organ freed under guidance of the eye, additional retractors being inserted to elevate the costal arch and lift up the peritoneum as far in as the median line of the body. The method is particularly applicable to cases complicated by dense adhesions. Drainage is established through a secondary wound in the loin. The muscles are sutured in two layers with interrupted sutures of heavy catgut.

Healing is usually rapid, even in infected cases. S. W. MOORHEAD.

Kellock: Ligature of the Renal Artery and Vein as a Substitute for Nephrectomy. *Proc. Roy. Soc. Med.*, 1913, vi, 179. By Surg., Gynec. & Obst.

The author's attention was called to ligation of the renal vessels as a substitute for nephrectomy by the report of a case of tuberculosis of the kidney, operated upon by this method by an Indian surgeon. The method appealed to him as a useful one, and he accordingly adopted it in a case of pyonephrosis due

to renal calculus with a renal sinus in the loin. The kidney had previously been incised, an abscess opened which continued to discharge through the persistent lumbar sinus. As the patient was in poor condition, Kellock explored the wound, found the calculus the size of a hen's egg which he removed, and two weeks later ligatured the renal vessels through abdominal route.

In ten days the urine had become much clearer, the patient had improved, and there was very little discharge from the sinus. After nine weeks this sinus was again explored and several friable masses of kidney tissue came away. The wound then healed, and the patient recovered his health. The author discusses the technique of ligature by the abdominal route, and points out that on the right side the vessels are more difficult to reach since the head of the pancreas and the duodenum overlie them.

In the discussion of the paper, Swan said that he felt it would be a useful method in cases of renal sinus in the loin, but he did not believe it would check suppuration of a tuberculous kidney. Makins reported a case in which ligation was performed, and the effect was only temporary, possibly due to the presence of a supplemental renal artery which preserved the circulation of the kidney.

Guiteras: Some Aspects of Renal Surgery. *Canad. Pract. & Rev.*, 1913, xxxviii, 191.

By Surg., Gynec. & Obst.

This article is the report of an illustrated lecture given by Guiteras. It consists chiefly of references to cases in his own experience, with a few general observations on the conditions thus illustrated.

The lecturer considers first developmental anomalies of the kidneys, such as unilateral, asymmetrical and horseshoe kidney, and variations in the position of the organ. He speaks also of cases of hydronephrosis, rupture of the kidney, nephrolithiasis, cystic and polycystic kidney, and renal tumor.

Two cases of unusual interest which he mentions concern the rupture of a pyonephrotic kidney containing calculi, and hydatid cysts of the kidney.

GEORGE G. SMITH.

Lloyd: Is Decapsulation of the Kidneys for Chronic Bright's Disease Justifiable? *Post-Graduate*, 1913, xxviii, 338. By Surg., Gynec. & Obst.

Basing his observation upon the record of 102 cases previously reported by Edebohls, and 19 cases reported by himself, a total of 121, of which 41 cases were cured and have remained well, the author concludes that the operation is justifiable. In addition to the 41 cases cured, 53 others were improved. All of the cases referred to had resisted careful and scientific medical treatment. Few of them had received post-operative treatment of any kind, improvement being due solely to effects of renal decapsulation. The mortality of the operation was slightly above 10 per cent.

The author believes that the immediate good effects are due to the "massage of the kidneys" and the relief to congestion afforded by the direct abstraction of more or less blood from the organ during operation. In all cases that are steadily progressing, in spite of rational medical treatment, operation is advised.

THOS. C. HALLOWAY.

Baright: Method of Classification, Diagnosis and Therapy of Kidney Disorders, Based on Functional Testing. *Med. Rec.*, 1913, lxxxiii, 699. By Surg., Gynec. & Obst.

The author gives a history of kidney disorders from the time of Bright (1836) up to the present. He cites the different theories including the modern view. This is as follows: The urinary water and crystalloids are separated from the blood serum in the glomerulus by a simple process of infiltration which is dependent upon the blood pressure and chemical composition of the serum; in the tubule, the primary urine is concentrated by water reabsorption and at that time is enriched by the addition of certain organic and inorganic constituents. He discusses the normal function of the kidney and divides it into three processes: simple filtration, osmosis and synthesis. He discusses the diagnosis of dropsical and non-dropsical or uremic nephritis as well as the method of producing experimental nephritis by the administration such as cantharides, corrosive sublimate, etc. He prepared a schematic outline for the classification, diagnosis and therapy of kidney disorders from his experience and knowledge of the kidney. The article is very exhaustive.

J. RADDA.

Braasch: Recent Progress in Ureteropyelography. *J. Mich. St. M. Soc.*, 1913, xli, 189.

By Surg., Gynec. & Obst.

Ureteropyelography has been employed in the Mayo Clinic in the treatment of more than 1,000 patients without fatality or permanent injury. The following technical precautions are to be employed: (1) Colloidal silver crystals are to be carefully ground in mortar and then filtered; (2) solution to be warmed and not boiled; (3) solution to be injected by gravity method; (4) large ureteral catheter should be used. Contra-indications for its use are (a) in markedly hypersensitive individuals; (b) with ureteral obstruction which will not permit the pelvis of the kidney to drain after the colloidal injection, as with large hydronephrosis; (c) in any condition which can be definitely diagnosed without ureteropyelography. When the ureter appears kinked in the erect pyelogram or when the ureter assumes an anomalous course after leaving the pelvis there is no objective indication for operation unless a dilatation of the pelvis or ureter can be demonstrated above it. It is often difficult and occasionally impossible to distinguish between the outline of a small hydronephrosis (20 to 30 cc.), and that of a large normal pelvis. Small hydronephroses must be completely distended in order to be recog-

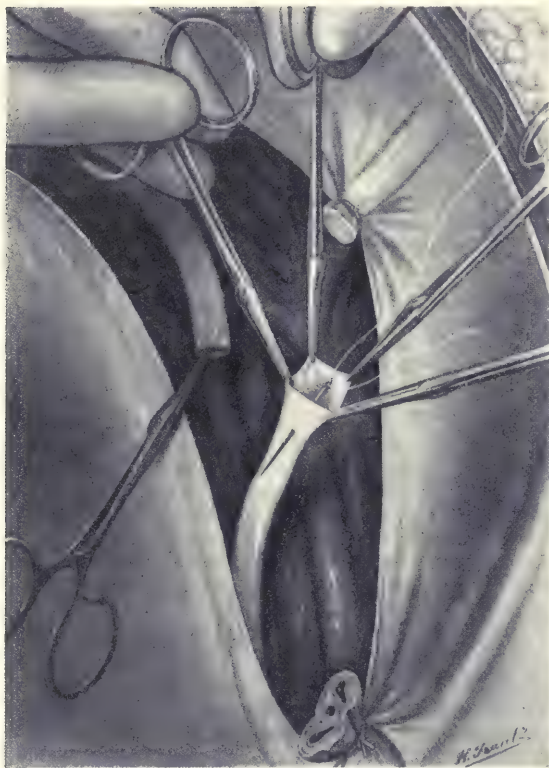


Fig. 1. (Proust and Buquet.) Preparation of the superior end. The needle, having traversed the wall of the ureter from within, out, at a distance from the cut edge, is returned from without, in, close to the cut edge.

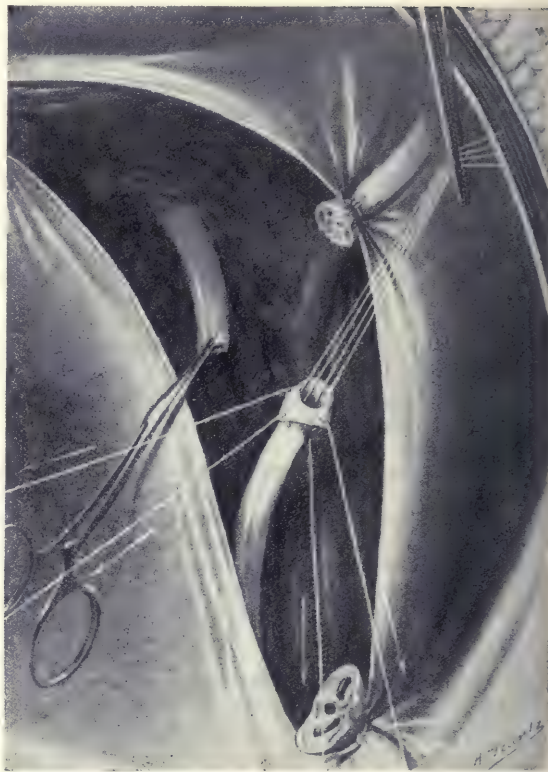


Fig. 2. (Proust and Buquet.) Preparation of superior end. Tension upon the opposite ends of the sutures causes eversion of the mucous membrane.

nized. Care is required to fully distend the ureter in order to demonstrate dilatation. Gas and oxygen as injecting mediums instead of colloidal silver have not proved practical in the author's experience. Confusion of the shadow of the pelvis injected with air with that caused by gas in the adjoining bowel renders interpretation uncertain. Lack of detail in air-distended pelvic outline is a disadvantage. Distention of ureter is frequently difficult to show unless fully distended. Colloidal silver will not outline ureter if allowed to run in from the bladder when the patient is in the Trendelenburg position unless the meatus be dilated.

Proust and Buquet: Technique of Circular Ureterorrhaphy (*Technique de l'uréterorrhaphie circulaire*). *J. de chir.*, 1913, x, 417.

By Surg., Gynec. & Obst.

The indications for circular ureterorrhaphy, state Proust and Buquet, are almost exclusively furnished by cases of voluntary or involuntary section of the ureter in the course of operative procedures. In a general way, the end to end suture of the authors is accomplished by one of the following methods: Direct suture, suture upon a conductor, and suture by

invagination. After a comprehensive review of the literature, with comments upon the technique of the exponents of these three methods, the authors, disclaiming originality for their ideas, base their operation on these fundamental points: i. e., invagination (after Poggi); eversion of the mucosa of the superior end (after Ricard), and the folding in of the inferior end (after Pozzi).

First step: Preparation of the superior end of the ureter; eversion of the mucosa. After trimming the cut edge smooth with the scissors, the mucosa is grasped at four equidistant points by fine toothed artery forceps (Kocher-Terrier) and carefully separated from the overlying tissues with the non-toothed dissecting forceps. When the eversion of the mucosa can be easily accomplished, one stitch is passed in each space between the forceps including the wall and cuff. When the eversion presents some difficulty, its fixation is accomplished by a special manoeuvre. A cambric needle threaded with 000 catgut is passed through all coats of the ureter from within out, about one centimeter from the cut edge. This same needle is returned through the wall from without in, very near the free edge (Fig. 1.) The procedure is repeated in the remaining three

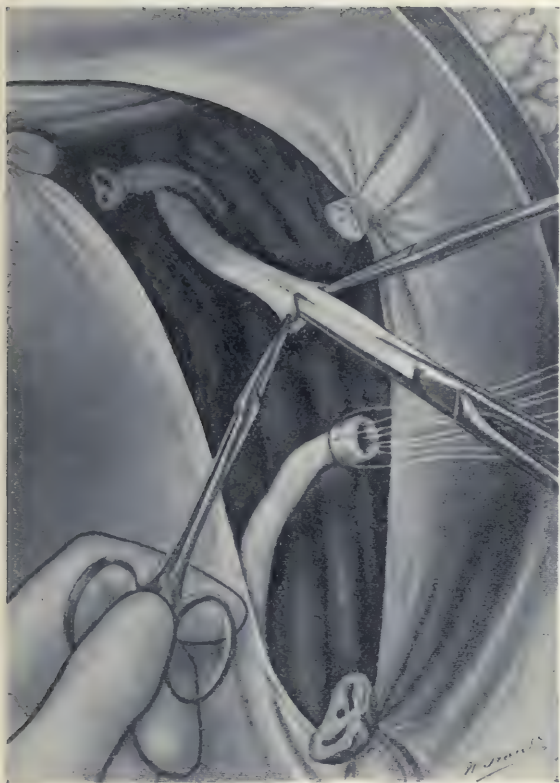


Fig. 3. (Proust and Buquet.) Preparation of the inferior end. Longitudinal incision.

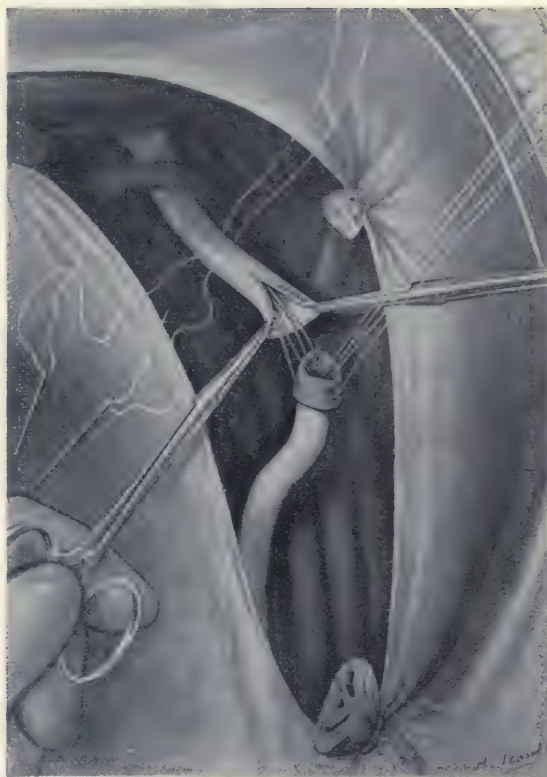


Fig. 4. (Proust and Buquet.) Ready for invagination. Introduction and fixation of the posterior and internal guide sutures.

spaces between the guide forceps. To evert the mucosa, equal traction is made on all threads; the four which emerge nearer the cut edge are pulled up toward the kidney, the others down (Fig. 2).

Second step: Preparation of the inferior end. In order to prevent compression of the invaginating superior extremity, the upper end of the inferior extremity is dilated by gently separating the blades of a fine artery forcep introduced into the lumen. Next, two artery forceps as guides are placed close together on the cut edge and the ureter divided longitudinally between them for a distance of one centimeter (Fig. 3).

Third step: Invagination. This is accomplished by means of the four sutures in the superior end. Each end of each suture is threaded on a cambric needle. That emerging externally (the one which engages the everted mucosa) is introduced into the lumen of the inferior end and pierces the wall from within out, about two centimeters from the margin; that emerging internally (the one which emerges from the lumen of the ureter) is introduced similarly to the first, parallel to it, and emerges from the wall from within out, two millimeters lower (Fig. 4). The order of introduction followed by the authors is to commence with the posterior pair, then the internal,

external, and finally the anterior. To complete the invagination, the eight ends are carefully paired, gently drawn until slight resistance is met, each pair tied and the loose ends cut (Fig. 5).

Fourth step: The inversion of the inferior end. Near each border of the longitudinal cut, at equal distance from its extremities, a single short stitch is taken with fine catgut. Drawing upon the loose ends of these stitches causes the center of the flap ends to bulge, and the ends are easily turned in by means of the grooved director (Fig. 6). The inversion is completed for the entire circumference and is held in place in the following manner: The inner end of each guide suture is threaded on a fine curved needle, with which a single stitch is taken in the wall of the superior end of the ureter; care being taken not to enter its lumen. Two similar sutures are taken posteriorly, and tied. Before tying the two anterior sutures, a stitch is taken in the free borders of the longitudinal incision in order to close this cut and at the same time to assure the apposition of the inverted wall (Fig. 7). It is equally important to note that the approximating sutures should not be in the same longitudinal axis as the sutures of invagination but should alternate regularly with them (Fig. 8).

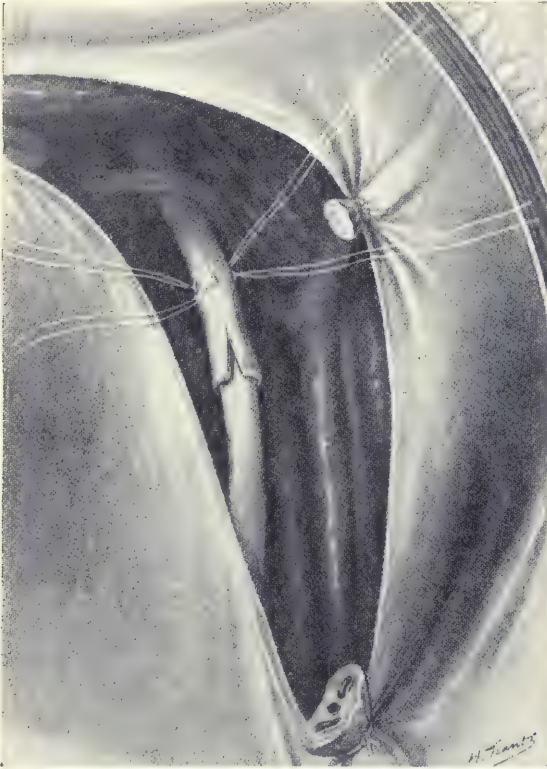


Fig. 5. (Proust and Buquet.) The invagination completed. The ends of the guide sutures are tied in pairs.

The great advantage of this technique, claim the authors, is that the coaptation is obtained more by the disposition of the surfaces than by the action of the sutures, and no matter how quickly the catgut is absorbed there will follow no separation of the two ends. Also from the viewpoint of ulterior functional result, the eversion of the mucosa is of enormous advantage for it produces an orifice lined with mucous membrane and a protection against retraction.

The functional results of experimental ureterorraphy, as studied by Alkane, show that the rhythmic ejaculation of the sutured ureter is much slowed, but each ejaculation is more abundant. Alkane explained this phenomenon by a slight stenosis which makes it necessary for the superior end to become distended and form a pouch before it could empty itself into the lower end. In a case quoted by the author, seven months after operation, the sutured ureter gave four ejaculations per minute each of eight to ten drops of clear urine, similar in many respects to that of the opposite side.

The conclusion drawn by the authors is that from the point of view of physiologic result, the eversion of the mucosa added to the classical procedure of invagination assures a much better outflow of urine and more surely prevents stenosis. Collected

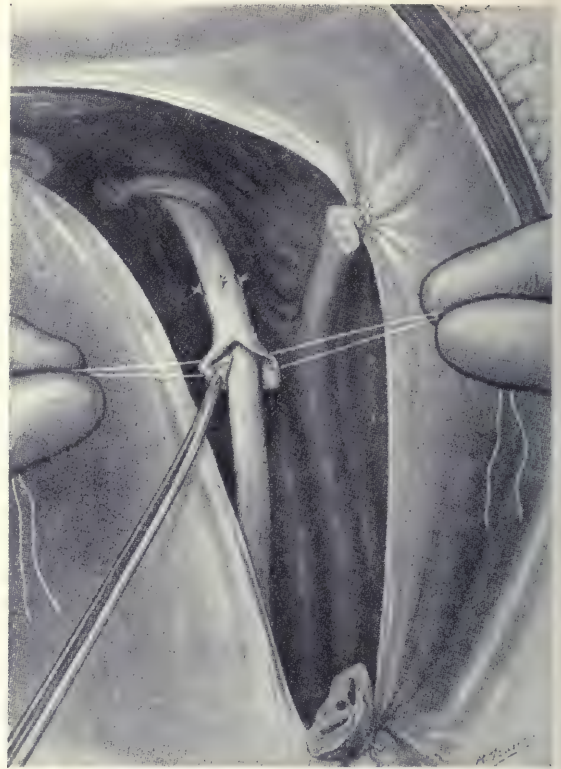


Fig. 6. (Proust and Buquet.) Showing the method of turning in the inferior end with the grooved director while traction on the two loops of catgut causes the edges of the longitudinal cut to balloon out.

statistics show that suture by invagination gives one half as many urinary fistulæ as the suture direct. Also invagination permits the use of catgut as suture material; whereas silk, necessary in the direct method, may be a starting point of urinary calculi. In practising the suture by invagination, especially with eversion of the mucosa, it is essential that the ureter be long enough to allow a good overlapping of the two ends. The ureter can only have been cut, not resected. If the loss of substance is such that it causes a noticeable stretching, it is better to resort to the suture direct and if this threatens to be followed by a marked tension, due to retraction of the two ends, it would then be more prudent to resort to the suture upon a conductor. ELLIS FISCHEL.

Bonn: Ureteral Catheter Diagnosis and Therapy.
Indianapolis M. J., 1913, xvi, 137.

By Surg., Gynec. & Obst.

The writer discusses the technique of ureteral catheterization in detail with especial emphasis upon the X-ray procedure. He discusses determination of the capacity of the renal pelvis, vesical lesions, stricture and obstruction of the ureter, dilatation and fistula of the ureter, hydronephrosis, acute pye-

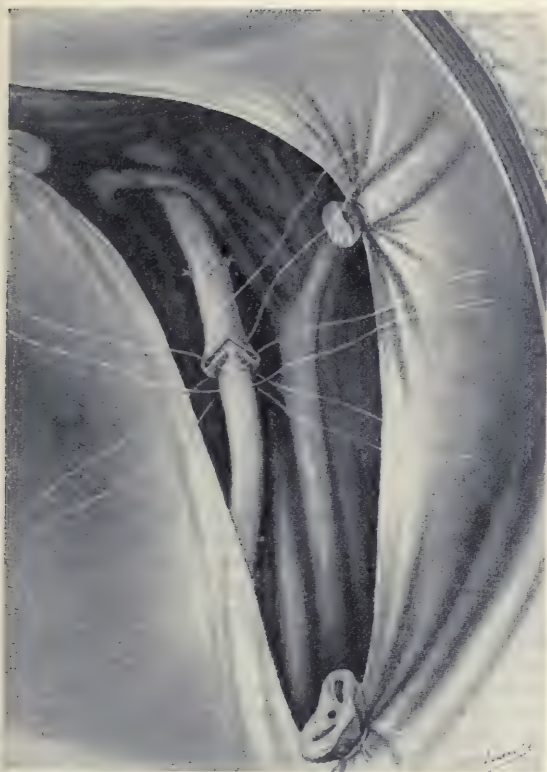


Fig. 7. (Proust and Buquet.) Approximating sutures showing the position of the sutures.

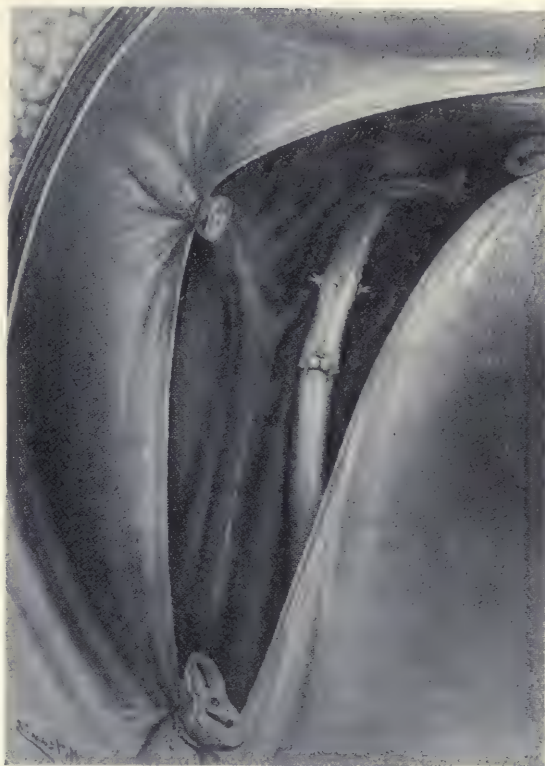


Fig. 8. (Proust and Buquet.) The completed operation. Note the alternating position of the knots in the two rows of sutures.

litis, cystitis, hæmatogenous renal infection, pyonephrosis and renal tuberculosis.

In conclusion, Bonn calls attention to the frequency of errors in the diagnosis of renal tuberculosis. "There are many cases of renal tuberculosis," he says, "that are now being treated for retroversion of the uterus because the tipped-up portio vaginalis produces a certain amount of vesical irritability." The author assumes that the diagnosis is usually in error and cites three cases as proof. In these cases the faulty diagnosis occasioned delay which made possible the development of bilateral renal tuberculosis.

The author recommends better diagnosis and an early nephrectomy. He also suggests dissection of the ureter and ligation close to the vesical meatus. Where such procedure is contra-indicated the writer recommends "auto-ureterectomy" by the injection of pure phenol.

HARVEY A. MOORE.

BLADDER, URETHRA, AND PENIS

**Buerger: The Pathology and Treatment of Cal-
lous Ulcer of the Bladder.** *Med. Rec.*, 1913,
lxxxiii, 656.

By Surg., Gynec. & Obst.

The author, in his very interesting article, makes a point in stating that the so-called cases of simple

ulcers of the bladder are not of the type that he terms callous variety. He states among other things that "a superficial study and cursory perusal of the reported cases in the literature may give the impression that topical applications of silver nitrate can cure simple ulcers of the bladder."

"A critical review of the history of such cases and the cystoscopic findings would lead to the conclusion that such cases belong to the superficial variety of ulceration, and that no case of deep-seated callous ulceration has been cured by topical application of medicaments alone." He further states that the cases which he diagnosed under this heading did not yield in any way to repeated fulguration.

After detailing two of his cases, he draws the following conclusions:

1. Clinical, cystoscopic and pathological studies in two cases of vesical ulceration have conclusively shown that simple callous ulcer of the bladder can and does exist.
2. The clinical symptoms of this condition are intense dysuria, urgency, frequency of micturition, with sanguineous and purulent urine. The manifestations become progressively more marked and take a chronic course.
3. The chronicity of this disease and the pro-

gressive impairment of vesical capacity speak strongly for the view that chronic cystitis and contracted bladder are often the sequelæ and outcome of solitary ulceration.

4. The region of the trigone seems to be the favorite site for the chronic indurated type of ulceration.

5. Although designated as simple, and often as solitary, ulcer of the bladder, this condition may be accompanied by superficial erosions of the mucous membrane, elsewhere in the bladder, which are undoubtedly secondary to the intense cystitis accompanying the ulcer.

6. The most effective and rapid method of curing the disease as well as the simplest procedure is the excision of the ulcerated area by means of the author's operating cystoscope and punch forceps.

7. Less radical measures of treatment, such as cauterization with the actual cautery or fulguration, and silver nitrate irrigation are of no avail in this type of ulcer.

8. Histological examination in two cases has shown that the pathology of this condition is rather characteristic, there being a superficial deposit of urinary salts, a layer of necrosis and ulceration, and a stratum of newly formed connective tissue with active evidences of inflammation. The margin of the ulcer shows intensely vascular inflamed mucous membrane and submucosa.

9. In every case of chronic cystitis, particularly in women, where dysuria, urgency, and frequency of micturition are marked, a careful search should be made for this form of ulcer, for if it be present it is more than likely that a chronic cystitis and an irritable and contracted bladder are secondary, and may be cured by the method advocated.

IRWIN S. KOLL.

Newman: Chronic Cystitis and Retention of Urine, Treatment by Drainage and Its Beneficial Effect Upon Damaged Kidneys. *Practitioner*, Lond., 1913, xc, 672.

By Surg., Gynec. & Obst.

In this article the author presents the results of his personal experience in drainage of the bladder in cases where back pressure from obstruction has damaged the kidneys. He reaches the following conclusions:

1. Obstruction to the free escape of urine, involving increased tension in the kidneys, may lead to the development of symptoms—polyuria, albuminuria, and toxemia—resembling those of interstitial nephritis, which form serious complications of the bladder trouble, and, if not relieved, ultimately lead to toxæmia.

2. Drainage may be carried out in three ways: (a) By urethra, (1) intermittent catheterization and irrigation, (2) continuous drainage by inlying catheter. (b) By perineal urethrotomy. (c) By suprapubic cystotomy.

Of these methods the author prefers suprapubic cystotomy.

3. By free continuous drainage of the bladder these symptoms diminish and ultimately disappear, and the patient is placed in a more favorable condition for operation should further treatment be required.

4. Free continuous drainage is also followed by diminution in the size of the kidneys and contraction of the ureters, so that the orifices regain their normal valvular action.

5. In chronic cystitis, free drainage by suprapubic cystotomy is the surest method of giving relief to the symptoms or of curing the disease.

Cumston: Suprapubic Cystostomy. *N. Y. M. J.*, 1913, xcvi, 646.

By Surg., Gynec. & Obst.

The indications for cystostomy in cancer of the prostate and in all other malignant neoplasms of the bladder and urethra arise under two very different circumstances—when the growth is still operable it is a temporary palliative operation, and it is permanently palliative when the growth has become inoperable. The symptoms of malignant affections of the prostate are quite the same as for simple prostatic hypertrophy. In either case, the indications for suprapubic cystostomy are the serious complications, as acute retention, severe infection, intolerable pain, profuse hematuria, and bad general condition. Suprapubic drainage will relieve the urgent symptoms and allow at a later date the removal of the diseased gland. The author presents six cases of suprapubic cystostomy in the inoperable stage who were made comfortable from two months to two years. In operable cases, total prostatectomy should follow as soon as the conditions admit. Frequently the progress of the malignant disease is lessened by the favorable general effect of the operation and in some cases the life of the patient is thereby considerably prolonged. Desnos reports a case that survived the operation for over four years. The author includes in his indications malignant disease of the rectum and other intrapelvic carcinoma which may have involved either the prostate or bladder to the extent of giving rise to severe urinary disturbances, and especially recommends permanent suprapubic cystostomy in all cases of inoperable prostatic malignant disease, since a temporary cystostomy will rarely suffice.

HARRY D. ORR.

Gosset: A Case of Exstrophy of the Bladder Treated by the Operation of Heitz-Boyer-Hovelacque (Un cas d'exstrophie vésicale traité par l'opération de Heitz-Boyer-Hovelacque). *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 229.

By Journal de Chirurgie.

Gosset presents a boy, 19 years old, whom he had operated for exstrophy of the bladder by the method of Heitz-Boyer-Hovelacque. Three operations had previously been done at eight, fifteen and sixteen years by the plastic methods then in use and each time it failed. Gosset followed the technique of Heitz-Boyer-Hovelacque exactly and considers it

perfect. He began the operation with the intention of using the method of Cuneo, which had attracted him and seemed the simplest. In the last step of the operation it is necessary to use a loop of the ileum with a long mesentery, one that can be pulled down easily. In the case at hand he found that he could not lower the terminal loops of the ileum. He therefore turned to the method of Heitz-Boyer-Hovelacque.

In this method the most delicate point is the anastomosis of the left ureter; the vessels of the mesocolon interfere but nevertheless they must be preserved.

Gosset carried out the entire operation at one time. His patient was cured. It must be noted that the upper urinary passages were not infected. The patient can hold his urine during the day. During the night he had involuntary passage only twice during two months. J. DUMONT.

Cumston: Excision and Suture in the Treatment of Dense, Close Urethral Strictures. *Ann. Surg., Phila., 1913, lvii, 536.*

By Surg., Gynec. & Obst.

Cumston describes what he considers the operation of election in cases of dense, close urethral strictures. Such strictures, he says, occur most commonly after traumatic rupture of the bulbar urethra. Excision of the scar without doubt gives the best results; there are, however, several methods of treating the severed urethral ends.

Any method requiring a permanent catheter in the urethra is bad: urine cannot be kept out of the urethra; it stagnates about the line of suture, causing suppuration and resulting scar; orchitis is caused by the catheter. Urethrostomy, on the other hand, requires two operations and perineal urination for months.

In the operation which Cumston advocates, the urethra is opened on the point of a sound just in front of the stricture. The cicatrix is removed as completely as possible; as much as 6 cm. of urethra may be resected. The posterior segment is freed for 1 to 2 cm., the anterior for 3 to 4. Sutures are then placed in the peri-urethral tissues so as to bring the ends together without tension; the ends themselves are united by fine catgut stitches while a large sound is in the urethra. The urethra is opened upon the sound at least $1\frac{1}{2}$ cm. behind the suture line, and a catheter fastened in the bladder through this incision. The perineal wound is closed for two thirds of its extent.

In case retrograde catheterization has been necessary, or the stricture is so deep that the button-hole would come in the membranous urethra, suprapubic drainage is advised.

The catheter is removed on the tenth day and sounds passed on the twelfth. The bladder should be washed daily but the anterior urethra should be left alone. In the presence of severe cystitis the catheter may be left in much longer than ten days. GEORGE G. SMITH.

Pedersen: Urethral and Periurethral Lithiasis. *N. Y. M. J., 1913, xcvi, 482.*

By Surg., Gynec. & Obst.

The author carefully discusses the three bases of lithiasis in all urogenital organs as disturbances in urinary metabolism causing precipitation of normally dissolved salts, and as disturbances in the hydraulics and physics of urination favoring retention and decomposition, usually with (rarely without) infection — both these constituting the primary pathogenesis of lithiasis. Foreign bodies the result of disease, surgery, and perversion are the third basis. These stones are migratory or formative — strictly native urethral stones. Calculi may become encysted in pockets and diverticula. According to Englisch, impaction occurs in the membranous urethra 42 per cent, in the penile urethra 58 per cent (navicular fossa 11.2 per cent, pendulous portion 14.5 per cent, scrotal portion 13.7 per cent, bulbous portion 18.6 per cent). From their origin stones may be endourethral and periurethral. Lithiasis affects children and adults, giving in the former objective symptoms only and in the latter usually a previous history followed by a crisis of shock, anuria, retention of urine, distended and tender bladder, rupture of the urethra and extravasation, especially in children.

On physical examination stones may frequently be located with the urethroscope and sounds within the urethra, or with the finger externally or through the rectum. Numerous case reports of lithiasis in children with and without fatal issue of operation are cited. Numerous case reports of urethral calculi are cited having native migratory and foreign body origins. A preference is shown for the classification of these stones into those of the anterior and posterior urethra from the standpoint of treatment rather than from the standpoint assumed by the German authorities, namely of the division of the stones into the strictly endourethral and exourethral sources. The author's case of prostatic calculi is described under the heading of periurethral lithiasis.

The relation of radiography to urethral and periurethral lithiasis is briefly discussed. Treatment is concerned with preventive and curative measures. The former embraces the management of metabolic errors, both systemic and urinary. Curative treatment includes emergency and election cases. Emergency work in this field is usually met with in childhood and old age, while the midlife conditions are mostly of the election type. The presence or absence of complications makes up the chief point of the election cases. Uncomplicated simple urethral lithiasis has its own and obvious indications. On the other hand the complicated, which usually means infected, cases add the element of free drainage as well as the removal of the stone or stones. This is a valuable review of the whole subject through the history of the past up to the present in the light of modern urological knowledge and diagnostic acumen.

GENITAL ORGANS

Culler: Epididymotomy: A Plea for a Rational Treatment of Epididymitis. *Am. J. Urol.*, 1913, ix, 193.
By Surg., Gynec. & Obst.

In this short article the author makes a plea for the operative treatment of epididymitis, claiming that this is the only rational treatment. He states that gonorrhœal infection of the epididymis results in abscess or cyst formation and therefore drainage is necessary.

Early experience with Hagner's operation convinced him of the value of epididymotomy, but he considers this operation too formidable. He describes his simple technique, which he has used in a series of sixteen cases. The steps in his operation are as follows: An incision three fourths of an inch in length is made over the most prominent point of the infiltrated mass down to the dense fibrous covering of the epididymis. Puncture of the tunica vaginalis is made from the nearest wound angle with a needle or a tenotome. An incision in the dense fibrous covering of the major or minor is made in the long axis of the tumor. The point of a hæmostat is then thrust into the mass with the idea of entering the pus pocket, the instrument is opened and then withdrawn. A piece of No. 3 tubing one inch in length is inserted into the bottom of the wound and fixed with a suture. Copious dressings and a jumbo suspensory complete the procedure. Pus will be found in all advanced cases and the fluid escaping in incipient cases will be found to contain gonococci.

In this series of sixteen cases he noted the following results: 1. Sudden and permanent relief of the pain. 2. Defervescence in forty-eight hours. 3. Rapid reduction in size of inflammatory mass. 4. Early healing of operation wound without suppuration. 5. Early convalescence without relapse.

H. A. FOWLER.

Armstrong: Prostatectomy—Suspension of the Bladder. *Canad. M. Ass. J.*, 1913, iii, 167.
By Surg., Gynec. & Obst.

The author advises the suprapubic operation for the removal of the prostate. He also advises the suture of the bladder to the anterior wall and the obliteration of the prevesical space at the time of the operation. These two results are obtained in the following manner: A catgut suture is passed through the anterior sheath of the rectus and through the edge of the opening into the bladder from the outside, in and then out again through the bladder wall and the anterior rectus sheath, the point of exit from the bladder being either one inch above or below the point of entrance. This is repeated on the other side. When these two sutures are tied the bladder is firmly anchored to the abdominal wall and the prevesical space is practically closed.

The author maintains that this operative technique tends to obliterate the post-prostatic pouch, and patients are relieved of their residual urine at once.

V. D. LESPINASSE.

Rockey: Prostatectomy by a Composite Method. *Surg. Gynec. & Obst.*, 1913, xvi, 424.
By Surg., Gynec. & Obst.

The method is termed "composite" because it utilizes features of technique devised by various operators. These have been blended to form what the author at this time considers the best procedure in the facility of operation with minimum danger, speedy recovery, and excellence of final results.

The operation is a suprapubic enucleation, utilizing the technique developed by Belfield, McGill, Fuller, Guiteras, Freyer, Squier, and the author. His additions are short incision, valvular suspension of the bladder by two stitches, and the total abandonment of irrigation, either at the time of operation or as a routine during the after-treatment. Intravesicle retractors, sponging, and packing are not used.

The detail of the operation is as follows: Spinal anæsthesia is produced by stovaine, or general narcosis by ether. The bladder is filled with warm water. When catheterization is difficult, and the bladder is already distended with urine, the operation may proceed without any bladder irrigation.

Wishard: Pre- and Post-Operative Treatment of Prostatectomy. *Lancet-Clin.*, 1913, cix, 258.
By Surg., Gynec. & Obst.

The author of this paper lays particular stress upon the preparatory treatment as well as the post-operative care of the cases subjected to prostatectomy. Not only does he consider better results obtainable by way of cure, but better opportunity for the study of cases, where the patients are subjected to a preparatory treatment. It has been the author's custom "for many years to secure drainage by catheter anchorage during a greater or less length of time before operation, and where the anchorage of the catheter could not be borne, to have recurrent catheterization as systematically followed as possible. Relief of bladder irritability, improvement of the condition of the urine, and especially in diminution of amount of pus, epithelial débris, and improvement in the specific gravity, reaction, odor and the presence of urea, have been usually observed where this plan has been followed." More recently he has given more time to the functional elimination test and has observed that a careful preparation has influenced good results along this line. Improvement in elimination has always followed systematic use of normal saline solution by proctoclysis. He calls attention to the fact that the use of urotropine in large doses and covering a long period of time should be given with care, because not infrequently there are no results obtained from same; at the same time bad results may intervene, such as irritation of the kidneys. The average period of preparatory treatment required in the author's cases has been "from one to two weeks."

During anæsthesia normal saline solution is given by hypodermoclysis in practically all of his cases. He notes a warning to operators by remarking that

the liability to post-operative hæmorrhage is much influenced by the carefulness with which enucleation is done. He lays stress upon the use of continuous irrigation.

In the perineal operation the author utilized a metal inflow and outflow tube devised by his assistant, Hamer.

The handling of the patient is greatly facilitated by the separate and complete wrapping of each leg in a blanket, which also facilitates the handling of whatever drainage apparatus may be employed.

"The question of getting the patient up early is," the author believes, "to be fairly regarded as still debatable; getting the patient into the semi-upright position the first or second day following operation by a properly adjusted body support has seemed both beneficial and desirable."

He concludes by remarking that occasional occurrence of fistula is not necessarily an argument against any form of enucleation. He has had no permanent incontinence following in any of his cases operated by the median perineal incision, although it has persisted for a greater or less length of time in some of them. "Systematic and persistent use of dilatation of the prostatic urethra and vesical orifice with the Kollman dilator has usually given prompt relief."

IRVIN S. KOLL.

Kolischer: The After-treatment of Suprapubic Prostatectomy. *Surg., Gynec. & Obst.*, 1913, xvi, 332. By Surg., Gynec. & Obst.

The author discusses the after care in two divisions — the attention to the field of operation, and the upholding of the general condition of the patient.

The most important factor in the local care is the maintenance of proper drainage of the bladder; this is accomplished by connecting the bladder tube through a glass coupler with a long rubber tube, the distal end of which dips into a graduated vessel containing some antiseptic fluid, which is placed on a lower level than the body of the patient; a continual syphonage is started and maintained by injecting fluid through the long tube into the bladder and then submerging the free end of this tube, while it is still filled, into the fluid contained in the receiving vessel. Any interruption of syphonage is marked in the glass coupler by the appearance of air bubbles, in which event the drainage is re-established by again injecting fluid. Once in 24 hours the bladder is disinfected with a 20 per cent argyrol solution, and the silver salve dressing is renewed at the same time. After three days the bladder tube is removed and the bladder is flushed out by means of a soft catheter and a hand-syringe with a 1:5000 silver solution. The urine then drains out of the abdominal fistula into the gauze and oakum pad dressing, underneath which the abdominal skin is protected from the macerating influence of the urine by a thick coating of vaseline. This dressing is changed every time the moisture penetrates the uppermost layers of the padding. All special devices for catching the escaping urine

are superfluous. In case the patient should fail to start natural urination on the seventh day a few large steel sounds are passed. The granulations of the abdominal fistula are occasionally stimulated by cauterization with the silver nitrate stick. The application of scarlet red has to be advised against on account of the danger of anilin poisoning and the possibility of epithelialization of the sinus leading to the bladder. In case of a pronounced retardation of the closure of the abdominal fistula, it is thoroughly cauterized with a galvano-cautery. A scraping of the sinus may lead to a very annoying hæmorrhage. Intense infection of the suture line calls for early opening of all the layers so as to prevent sloughing of the fasciæ. The cleaning up and healing of the infected area is greatly enhanced by prolonged warm tubbing before each dressing.

Severe post-operative hæmorrhage is checked by the introduction of a Barnes bag into the rectum, where it is fully distended, and by exerting counter-pressure through placing a heavy sandbag on the abdomen while the hips and knees of the patient are flexed. This procedure is preferable to opening of the bladder and packing, which manipulations are apt to produce shock, infection, and a repetition of the hæmorrhage upon the removal of the tampon. In order to enhance the coagulability of the blood, 10 cc. of serum are injected hypodermatically. In case phosphatic crumbs should appear in the urine the bladder is repeatedly flushed with a 1:5000 salicylic acid solution until these concretions have disappeared. In rare cases granulations will persist at the former site of the prostate, even after the abdominal fistula has closed. In such an event, after this fact has been ascertained by the cystoscope, these granulations are scraped off and their site is cauterized by the aid of an operative cystoscope.

In the general treatment the following points are to be observed: After the syphonage has been established a continuous rectoclysis, by the drop method, is begun, a 3 per cent glucose solution being used. This solution is perfectly innocuous to the kidneys and is of great nutritive value, with a selective action on the heart. This is continued until the patient is able to take sufficient fluid by mouth. On the second day after the operation the patient is made to sit up in bed, and on the third day he is placed in an easy chair. Insufficient elimination through the kidneys is stimulated by the administration of diuretin. The heart action is always carefully watched, and if necessary regulated by digitalis. Uræmic symptoms are also watched for and, if they appear, are treated by sweating, hot packs over the renal regions, diuretin and, in case of a very high tension, with venesection.

Freyer: A Series of 236 Cases of Total Enucleation of the Prostate Performed During the Two Years 1911-12. *Lancet*, Lond., 1913, clxxiv, 1018. By Surg., Gynec. & Obst.

This article is a short review of the work of Freyer during 1911-12 in removal of the prostate by the

suprapubic route. He has performed 236 operations during those two years with a mortality of 11 or 4.66 per cent. The patients varied in age from 49 to 90 years, with an average of 69 $\frac{1}{4}$ years. There were 65 octogenarians, eleven 79 years of age, and the remainder younger, with one as young as 49 in whom a stricture complicated the condition, Freyer performing also an internal urethrotomy before removing the prostate.

Freyer brings out the point of suprapubic drainage and secondary removal of the prostate. He recites a case (No. 595) which presented with over-distended bladder and in which he drained the bladder suprapubically and afterwards removed the prostate. This case suffered from uremic poisoning, and the urine showed a specific gravity of only 1.005 and contained a trace of albumin. The bladder contained 32 ounces. Freyer says: "This case illustrates one of the few conditions under which it is advisable to divide the operation into two stages."

Case No. 903 is given to illustrate the difficulties presented in an extremely fat patient. In this case the abdominal fat was five inches thick before the bladder was reached. Freyer does not suggest any method to diminish the difficulties of approach in fat abdominal wall.

In 190 cases the prostatic disease was complicated by stone. Among these 190 cases there were 16 deaths, or 8.42 per cent mortality, while among the remaining 846 uncomplicated with stone there were 41 deaths, or 4.84 per cent, so that the mortality in the former instance was nearly double that in the latter.

The article is very optimistic, and suggests that the last word has been said in prostatic surgery by this method. Freyer does not indicate what his pre-operative or post-operative treatment in these cases has been; nor does he suggest anything regarding the number of cases of malignancy in this series nor his indications for operating or not operating.

A. C. STOKES.

Cabot: The Operative Treatment of Prostatic Hypertrophy. *Lancet-Clin.*, 1913, cix, 260.

By Surg., Gynec. & Obst.

Cabot first cites two points in the doing of prostatectomy, the object being to remove the obstruction to urination with, "first, as little risk to life as possible; second, as little damage to other structures and functions as may be." Then, taking up a consideration of the most important anatomical points bearing upon the prostate and its environment, he considers the division of the various lobes of the gland, as follows: "(1) The posterior lobe, that portion of the prostate which lies behind the ejaculatory ducts and comes in contact with the urethra, only that portion which lies in front of the openings of the ejaculatory ducts; (2), the middle lobe, that portion lying in front of the ejaculatory ducts and behind the veru montanum; (3), the lateral lobes: these form the side walls of the urethra and generally fuse on their anterior aspect, thus forming the

roof." He then quotes the work of Tandler and Zuckerkandl as having demonstrated in a satisfactory manner that "the middle lobe, as they define it, is the chief and practically the only offender in hypertrophy."

Further, the author differentiates what is so little understood — "the radical distinction between the anatomical capsule of the prostate and the surgical capsule. The latter is not in fact a capsule at all, but is the prostate itself."

The relation of the hypertrophied prostate to the internal vesical sphincter "will depend upon the amount and direction in which the enlargement takes place."

Summing up the most important points in regard to the anatomy, he states: "(1) Only certain portions of the prostate are involved in the process known as hypertrophy; (2) the prostate itself is compressed by the tumor and lies chiefly on the inferior and lateral aspects of the mass; (3) the vesical and urethral aspects of the prostate in hypertrophy are covered only by the mucous membrane; (4) the ejaculatory ducts lie wholly behind the tumor, which rarely, if ever, extends further forward than the posterior border of the veru montanum."

Surgical principles involved in the treatment of hypertrophy. The author bases his subsequent estimate upon what he believes to be the average result in the hands of first-class surgeons, and not upon results obtained by a few highly trained specialists. He then cites the two forms of perineal prostatectomy, namely, the intraurethral enucleation and the transprostatic method — the operation of Young and the suprapubic method of removal.

Quoting the occurrence of fistulæ, he states: "The nature of this operation is such that in many hands fistulæ will occur, the commonest urinary, or more occasionally the rectal. In the vast majority of cases they close in a few weeks or months, but occasionally persist for years, and must be regarded as an annoying complication not infrequently consequent upon these operations." This has bearing upon the perineal route. In the hands of good operators, he further states, the mortality is low. Referring to fistulæ following enucleation by the suprapubic route, he states that the only form which can occur is that communicating directly with the bladder, and this will happen only in case of failure to remove the obstruction. In the presence of a sclerotic process without hypertrophy, failure to remove the obstruction is by no means rare. In a word, the occurrence of fistula is a direct indication of failure to remove the obstruction, this, of course, being referable only to the persistent fistula.

As to the mortality, he places it as high as 15 per cent, notwithstanding the remarkable statistics of Freyer. The cause of this high rate he cites as being probably more or less due to the difficulty with which hæmorrhage can be controlled, the production of shock, and greater liability to infection, due probably to less efficient drainage. He further states that he believes a more efficient control of

bleeding can be accomplished by thorough exposure of the field of operation, as advocated by Kolischer.

Briefly summarized, the relative merits of suprapubic and perineal operations in their present state of development seem to the author to be: "The suprapubic route is the anatomically correct approach. It attacks the hypertrophied portion at a point where it can be reached with less destruction of tissue and with the greatest certainty of complete removal of the obstructing portion. It does less damage to other structures, interferes less with other functions, and is followed by fewer complications. It is more certain to result in cure. The perineal operation shows at the present time a definitely lower mortality. It is a more difficult surgical procedure; no matter what technique be selected. It is more likely to do damage to other structures and functions, and is less certain to result in cure." Cabot is prepared to assent to the views of Carlier that the perineal operation survives only on account of certain contraindications of the suprapubic method. IRVIN S. KOLL.

MISCELLANEOUS

Pedersen: The Colon Bacillus in Genito-Urinary Diseases. *Tr. Am. Ass. Genito-Urin. Surg.*, 1913, May. By Surg., Gynec. & Obst.

By an extensive review of the literature the author shows that the subject has been receiving special attention during the past seven years. It would appear that the advanced knowledge of tuberculosis of the urinary tract had awakened the comprehension of primary colon bacillus infection of the same, and that this infection was proving to be of serious import. It is certain that the infection is usually hæmatogenous and descending, but there is evidence showing that ascending infection, starting externally to the urethra, does take place, especially in women. The urethra and bladder nevertheless may escape involvement, the infection spending itself on the kidney, usually the right. Direct lymphatic connection between the hepatic flexure and the right kidney has been anatomically demonstrated. It is probable that a similar lymph route exists between the rectum and bladder. The disease is often overlooked, especially in children, because the general symptoms, which are those of any infectious disease, often mask the slight local symptoms. Neglected, the local symptoms become severe and attract attention; but by then the damage to the kidney may have grown to serious proportions.

General treatment includes diuretics, urinary antiseptics, careful attention to diet and to intestinal conditions.

Vaccine therapy has not been of avail, partly because there are many varieties of colon bacillus and isolation of the causative one is difficult.

Radical surgical intervention may become imperative and does when pyelonephritis or pyonephrosis exists.

The author concludes with a brief analysis of etiological factors, symptoms, and lesions presented

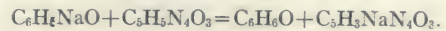
by sixteen cases in his practice tending to confirm the details of his paper.

Porter: Uric Acid Calculi. *N. Y. M. J.*, 1913, xcvi, 539. By Surg., Gynec. & Obst.

The author states that uric acid is formed normally in the secretory cells lining the uriniferous tubules. He also states that phenol when taken by mouth is changed in the stomach into sodium and potassium carbolates according to the following equation:



The carbolate is absorbed into the blood stream and is excreted by the Malpighian tufts of the kidney. It passes down the lumen of the uriniferous tubules until it reaches the location at which the uric acid is constantly being formed. When the carbolates come in contact with free uric acid, the two react upon each other and form a somewhat soluble urate of soda, with liberation of carbolic acid as shown in the following equation:



Thus is explained the favorable action of phenol in preventing the formation of uric acid urinary stones. V. D. LESPINASSE.

Walker: Recent Work in Genito-Urinary Surgery. *Practitioner*, Lond., 1913, xc, 701.

By Surg., Gynec. & Obst.

In this article is presented a review of the literature on recent work in genito-urinary surgery. The author quotes varying opinions of authorities in America and Europe without attempting to decide between them, although in certain instances he gives the results of his personal experience.

Among the means of estimating renal function are discussed the experimental polyuria test of Albarán, the comparative study of the urea in the blood and that in the urine, and the indigocarmine and phloridzin tests. In cases where catheterization of the ureters is impossible, owing to the condition of the bladder, Legueu recommends temporary ligature of one ureter, or suprapubic cystotomy and direct catheterization of the ureters. The author recommends in such difficult cases, which are generally those of tuberculosis, that a course of new tuberculin of some months' duration be given, which may so modify the vesical spasm that catheterization of the ureter becomes possible. Failing this, exploratory nephrotomy of the supposed healthy kidney gives most information, preparatory to a nephrectomy of the other kidney, should the disease be unilateral. Paschkis reports sixteen cases from Zuckerkandl's clinic, of bilateral exposure of the kidney in tuberculosis, in which advanced changes in the bladder rendered other methods of diagnosis impossible. This method of exploration is recommended, especially in very young children in whom other means of examination are very difficult.

Varying views are expressed as to the results of decapsulation of the kidney. Lebmman declares

it is indicated in the so-called renal neuralgias, in angio-neurotic hæmorrhages and especially in uremia occurring in acute nephritis; chronic nephritis, however, is not permanently influenced by the operation. Poter states that 100 cases of decapsulation in eclampsia are now on record with sudden and remarkable improvement and recovery in a certain number of cases. Sippel, in forty-six operated eclampsia cases, found thirty recovered from the disease who otherwise would certainly have died. Poter's statistics, however, show that the mortality of eclampsia without operation was 23.3 per cent, while that of decapsulated cases was 40.7 per cent. He regards the method as wrong in theory and useless in practice. Tyson states that in chronic nephritis the cases most favorable for decapsulation are those of the chronic parenchymatous type, and those associated with stubborn anasarca.

From experiments performed on rabbits, Moore and Corbett have drawn the following conclusions in regard to the damage done to the kidney by operation: The incision causes less damage than the sutures which are introduced to control hæmorrhage. Sutures passed through the renal capsule alone are insufficient to control bleeding. Mattress sutures through the kidney substance cause most extensive destruction. Stitches passing through the pyramids and knotted on the outside of the kidney cause least damage and should be preferred.

In a study on the subject of nephrectomy, Gerster states that mortality following primary nephrectomy is less than that following secondary nephrectomy, although in many cases the condition of the patient was too precarious for anything but nephrotomy at the first operation.

Jacobson and Keller declare that post-operative cystitis is more common than is usually supposed, and is often found in cases in which no catheter has been used. Retention of urine, trauma, and congestion are the most common predisposing causes and the colon bacillus is the usual infecting agent. Good results have been obtained by injecting into the urethra 15 to 20 cc. of a 2 per cent solution of boroglyceride with a urethral syringe.

Parker Sims advocates the transperitoneal route in operations on the bladder and prostate. He bases his view on "theoretical reasoning," and on the unfortunate results he has seen in the work of others. He declares transperitoneal cystotomy is an ideal operation, and should always be safe as far as infection is concerned.

At the Second Congress of the Association Internationale d'Urologie (London, 1911) the author

reports that there was a consensus of opinion that resections of the bladder for new growth should be extensive. Fenwick advised total removal of the bladder in recurrences, and in non-operated cases of multiple papillomata which are large and do not affect the ureteric orifices. If infiltration of the bladder wall by a malignant growth is palpable from the rectum, it is inoperable. Rövving hopes that the mortality of total extirpation of the bladder may, in the future, be considerably smaller than that of partial resection. He admits, however, that the danger of ascending pyelonephritis in the transplanted ureters, is a difficult problem to solve.

In regard to the causation of simple enlargement of the prostate, Wilson and McGrath do not regard any of the hypotheses at present held as acceptable, nor can they advance any satisfactory theory of their own. Pedersen would exclude from operation and place on catheter-life, cases of enlarged prostate in which there is chronic distention of the bladder, on the ground that the paralyzed muscle has lost all power of recovery, and that the removal of the prostate gland would not benefit the symptoms. This theory does not agree with the striking results of Freyer's work, where in many cases, even after years of complete catheter-life, the bladder regains its tone when the obstruction is removed. Squier states that "three factors should be considered when choosing the particular operation to be employed for the removal of prostate obstruction: first, the removal of the obstruction; second, an absolute certainty that the patient will be able to control the bladder and not suffer from post-operative urinary incontinence; third, preservation of the ejaculatory ducts and sexual capacity." The suprapubic route affords the "closest access to the obstructing lobe," it does not damage the external sphincter of the bladder, as the perineal operation very frequently does, and the sexual function is more likely to be preserved.

Various statistics on the mortality following the various operations of prostatectomy are reviewed. Young had a mortality of 10 per cent in 45 cases of suprapubic prostatectomy and 3.77 per cent in 450 cases of perineal prostatectomy. Freyer had a mortality of 5½ per cent in 1,000 cases of suprapubic prostatectomy. Where prostatic disease was complicated by stone in the bladder, his mortality was 8.84 per cent. Walker had a mortality of 5 per cent in 112 cases of suprapubic prostatectomy.

Bremerman uses nitrous oxide gas and oxygen as an anæsthetic for prostatectomy, and considers it rapid and safe, but contra-indicated in myocarditis.

H. L. SANFORD.

SURGERY OF THE EYE AND EAR

EYE

McKenzie: Cystic Distention of the Lachrymal Sac; Operation on Nasal Duct in the Nose (West's Operation). *Proc. Roy. Soc. Med.*, 1913, vi, 102.
By Surg., Gynec. & Obst.

The patient, a woman 32 years old, had been suffering from ethmoiditis for some years. Four months ago, after the removal of polypi from the left side of the nose, she noticed a swelling at the inner canthus of the left eye, corresponding in situation with the lachrymal sac. It was tense and fluctuating, and could be emptied into the nose by steadily pressing upon it.

West's operation was performed. Lachrymal probes, which formerly met with obstruction in their route towards the inferior meatus, now passed freely into the middle meatus. So far there has been no return of the swelling. EDWARD L. CORNELL.

Wright: The Extirpation of the Lachrymal Sac. *Northwest Med.*, 1913, v, 106.
By Surg., Gynec. & Obst.

The indications for extirpation of the sac are summed up by Wright as follows:

1. All cases of blenorrhea with a history of repeated probing.
2. A stenosis of the duct which does not yield easily and quickly to a No. 4 probe.

He then gives the description of the operation as done by Meller. C. G. DARLING.

Kennon: Report of a Case of Congenital Ptosis in Both Eyes Relieved by the Motais Operation. *Tr. Am. Ophth. Soc.*, 1913, May.
By Surg., Gynec. & Obst.

The excellent results obtained in this case is the author's apology for reporting it. Having met with failure to correct the deformity by means of the de Grandemont operation and the results being far from satisfactory in two cases in which the Panas operation was employed, the Motais was used in this case. Briefly the technique is as follows:

After the usual aseptic precautions, the tendon of the superior rectus is exposed and the incision in conjunctiva carried upward, an assistant pulling the lid as far upward as possible with the finger; the lid is then inverted and the incision carried on through the cul-de-sac and on to the junction of the lid to the upper border of the tarsal cartilage. A tendon hook is now passed under the tendon of the muscle and a strong silk suture threaded on two short curved needles having been prepared, one of the needles is passed through the tendon and out again so as to include its middle $\frac{2}{4}$. The suture

is now firmly tied around this middle $\frac{2}{4}$ and that part of the tendon cut from its attachments to the globe and the incision extended upward until a narrow ribbon of muscle about 12 mm. long is isolated.

Then with a dull pointed scissors a channel is dissected from the margin of the tarsus where the conjunctival incision ended and between the tarsus and the skin to the ciliary margin. One of the needles is then passed through the channel and made to emerge through the skin just above the cilla near the center of the lid, and the second needle is passed likewise, piercing the skin 3 mm. from the first. Gentle traction is next made on the sutures and the muscle slip is pulled into this channel in the lid until finally its end is drawn quite down to the ciliary margin when the sutures are tied over a small piece of folded gauze. The incision in the conjunctiva is sutured with great care with fine silk, that of the globe over the remaining superior rectus muscle and that of the lid over the muscle slip attached in the lid.

Especial care should be taken to carefully coapt the conjunctiva at the fornix, as a disregard of this precaution has led to prolapsi fornix conjunctiva.

The immediate effect should be considerably over correction and precautions should be taken to avoid exposure ulcer.

The patient, age six years, had a congenital ptosis of both eyes. The operations were done under ether anæsthesia; photographs were taken three years apart, which show that the effect is permanent. There is very slight limitation of motion observed in either eye.

Tyson: A Case of Congenital Apron of the Palpebral Conjunctiva. *Tr. Am. Ophth. Soc.*, 1913, May.
By Surg., Gynec. & Obst.

The patient was a woman, age 40 years, native of Hungary. Upon eversion of the upper lid of her left eye, the tarsal portion of the conjunctiva presented an appearance as if a fold of conjunctiva extending nearly the entire length of the lid, 28 mm. long and 5 mm. wide, near the fornix, had been pinched with a pair of forceps, had been lifted up and then pressed back against the center of the tarsus and had adhered to it along the upper edge of the fold, which was slightly irregular in contour. Near the temporal margin of the palpebral conjunctiva, 3 mm. from the external canthus, was a horizontal slitlike opening 4 mm. long, which admitted the largest Bowman probe, which could be passed between the layers of the conjunctival fold, a distance of 25 mm., almost to the inner angle of the eye. About midway a fibrous band could be detected which caused a slight narrowing at that point.

The color of the fold or apron appeared a trifle gray compared with the normal conjunctiva, but was transparent enough for the probe to be seen through it, and observed the entire length. No other malformation of the lid was present, nor was there any evidence or history of trauma, trachoma or conjunctival disease. As to the etiology of the malformation, the author agrees with Schapring, who stated "that admitting that during the embryonal life the amnion adhered to the layers from which the lids would be formed, and that by pulling, a fold in the future conjunctiva originated. Later the amnion separated from these tissues, and the fold remained permanently." A striking coincidence is the fact that nine out of the eleven cases reported in literature came from Eastern Europe.

Clark: Radium Treatment in a Tumor of the Orbit. *Ohio St. M. J.*, 1913, ix, 171.

By Surg., Gynec. & Obst.

Clark reports the treatment of a tumor of the orbit in a child two years old with exophthalmos of at least 1 cm. Duration three or four months, fundus normal, slight limitation of movement. No thrill or pulsation and firm pressure on eye in the direction of the apex produced no apparent yielding. A firm pressure bandage was used for some weeks with no improvement.

Canthotomy was performed, a large conjunctival incision made and external rectus was detached. The tumor mass could be seen to be made up of fairly large vessels and situated in the deeper part of the muscle cone. A tube of 10 milligrams of radium was inserted as deeply as possible without an incision and left for two hours. Considerable reaction took place for six or seven days. At the end of a week a rather decided improvement in the exophthalmos was apparent. The operation was repeated twenty-six days later. Seven months after the last operation a most marked improvement had taken place. The affected eye was slightly more prominent than its fellow. The movements of the eye were normal.

C. G. DARLING.

De Schweinitz and Shumway: Epibulbar Carcinoma; Histological Examination of the Specimen. *Tr. Am. Ophth. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

This growth began in the left eye of a man aged 34, fourteen years prior to the enucleation of the eye. Three months after enucleation there was recurrence in the orbit, the contents of which were therefore eviscerated. Microscopic examination demonstrated that the growth was a primary carcinoma of the conjunctiva beginning at the limbus, that it may possibly have started as a papilloma, and as the result of cauterization may have been stimulated to rapid growth and then assumed a malignant type. The authors reviewed briefly the literature of the subject and called attention to the percentage of cases in which perforation of the eyeball occurs in these circumstances;

namely, about thirty-seven per cent. In their own specimen perforation had not occurred, although the growth was of long standing. They also called attention to the youth of the patient, namely, that the growth began when he was only 19 years of age.

Usually epibulbar carcinoma is found in individuals over 40 years of age. There are, however, a number of records indicating that this tumor may appear even as early as the twelfth and thirteenth years of life. One reporter, namely, Rogman, describes an epibulbar carcinoma in a patient 20 months old. The authors believed that the safest procedure in the presence of epibulbar carcinoma was thorough enucleation of the eyeball, although in a very few instances small growths, especially those at a distance from the limbus, have been excised without recurrence.

Stallworth: Corneal Ulceration. *Md. M. J.*, 1913, lvi, 96.

By Surg., Gynec. & Obst.

The article begins with a concise consideration of the anatomy and physiology of the cornea. The author then speaks of the frequency of inflammations of the cornea as seen in the free dispensaries due to the poor hygiene, uncleanness, and the lowered resistance of this class of patients.

The first stage of inflammation of the cornea is infiltration, during which the leucocytes migrate to the diseased area. As a consequence of this, the cornea loses its transparency, taking on a smoked glass appearance. Absorption may take place at this time and the process heal, or if the amount of exudate becomes incompatible with the maintaining and absorptive powers of the cornea, there is a localized breaking down and ulceration of the latter structure. This localized loss of substance is recognized as a depression. If healing begins, the edges and the floor of the ulcer acquire a smooth and glistening luster and the process is now in its regressive stage. After a destruction of some of the corneal stroma there is some opacity left.

Simple ulcers: These are the small, marginal ulcers generally found in children, and among them are included the phlyctenules that have broken down. The symptoms are those of a deep irritation. The treatment advised is a mydriatic and irrigations with 1:5000 bichloride of mercury every three hours. In the phlyctenular ulceration 2 per cent yellow oxide salve with the proper constitutional treatment.

Ulcus serpens, or serpigenous ulcer, follows the severe infections, usually pneumococcus, especially when these result from a trauma. They appear as a disk, more deeply infiltrated around the edges, with the rest of the cornea presenting a steamy appearance. A severe iritis and an hypopyon are concomitant conditions. The symptoms are very violent and the ulcer has a marked tendency to spread.

Non-suppurating ulcers: The dendritic ulcers are so named because of the peculiar shape, not un-

like the branches of a twig. It occurs in young people of low vitality. The organism causing it has not been isolated. The symptoms are very mild. Zinc chloride solution ($\frac{1}{2}$ per cent) and treatment of the general condition is advised.

Malarial type of ulcer: This form of ulcer resembles the dendritic but occurs in people that give a history of malarial attacks. General treatment with quinine and arsenic will cause it to disappear. Ulcers associated with gonorrhœal ophthalmia, trachoma and herpes of the cornea are spoken of.

EARLE B. FOWLER.

Chance: Degeneration of the Corneas of a Man and His Adult Son. *Tr. Am. Ophth. Soc.*, 1913, May.
By Surg., Gynec. & Obst.

These cases are examples of nodular degeneration of the cornea as found in two or more generations or in several members of a family. The men were aged 54 and 26 respectively and each had been practically blind since infancy. No other members of their family for five generations were known to have had serious or unusual affections of their sight.

Each of all four corneas was occupied by a large but faint disk which covered the central two thirds of the corneal area, while the outer third, including the limbus was perfectly transparent and unaffected. The disks consisted of fine, dotted groups of a yellowish gray flocculent material or coagula, arranged in more or less radiating lines situated beneath Bowman's membrane and in the anterior layers of the stroma, as though resting between the membrane and the stroma. Here and there were glistening points like crystals. At the apex of the summit there were two larger, bubble-like bodies which projected beyond the general surface of the cornea. The epithelium was intact and glistened. The discoid areas terminated somewhat unevenly in an indefinite radiating network. The center of each disk was condensed, outside of that was a more or less transparent zone, while beyond was another denser portion which ended in more or less diamond-shaped reticulations. The corneal membrane beyond the areas was quite clear and healthy, showing neither infiltrate nor vessels. The crypts of the iris were deep; the reactions prompt. No view of the fundus could be obtained but the vitreous bodies were presumably clear and the retinas believed to be healthy.

The son's corneas presented the same characteristics as the father's except that the opacities were not so dense, and were more reticulate. The surfaces were even, smooth and polished, and distinctly sensitive.

The opacities were circumscribed and bilateral of approximately equal size in each eye, and each person's like the other's, except that the son's were less dense, or rather the lines were not so numerous. At first glance they looked like the residue of an interstitial keratitis. At the center of the patches the masses were so close together as to be without arrangement and it was only at the periphery that

the reticulation was apparent. There were no signs of inflammation, no pannus nor obliterated vessels. The irises were healthy. There was no criss-cross latticing of fine threads, as in Haab's and Feund's cases; nor pigment dots, as in Doyné and Stephenson's, and the surfaces were smooth as in Fehr's.

Each man was subjected to the Wassermann and to tuberculin tests, with negative results. A thorough study of their chemic metabolism showed the same comparative percentages as found in healthy individuals; and so also did the blood-content with the differential countings.

Harrower: Two Cases of Conical Cornea with Cataract. *Tr. Am. Ophth. Soc.*, 1913, May.
By Surg., Gynec. & Obst.

These cases were reported on account of their rarity. They both occurred in the author's practice within the period of a year. One had a thick nebula on the apex of the cone. This was a man of 67 who had been led by an attendant for two years.

He got vision enough to go about alone, and could read Jaeger's No. 8, although no glasses improved him.

The second case was a woman who had been operated on two weeks before this report was made. The vision was fairly good at the time the report was presented.

Sumner: Control of the Eye in Cataract Operations. *Ophth. Rev.*, 1913, xxxii, 105.

By Surg., Gynec. & Obst.

The necessity for the absolute control of the lids in the intracapsular operation, as emphasized by Smith, is brought out first in this article. Sumner then describes his method of lid control with pictures of his speculum and photographs of it in use, a method which he believes does away with the need of a trained assistant.

In this speculum the portion of the upper blade which slips under the eyelid is narrower and projects under the lid much farther than in the orthodox instrument. The handle is curved to accommodate the index finger and the ball of the thumb rests on the spring. The assistant holds the speculum between the index finger and the thumb, taking a firm grasp of it, while the other fingers lie against the side of the face. Pressure of the thumb on the spring end of the speculum acting through the index finger as a fulcrum tilts up the eyelids to whatever extent is necessary. The assistant's other hand is spread out over the patient's head and, the eyebrow having been well drawn back, his thumb presses against the upper edge of the orbit. By flexing or extending the wrist the upper blade may be made to slide under whatever portion of the upper lid most exposure is necessary according to the direction that the patient rolls his eye. By pronating or subinating the forearm, the correct amount of "lift" of the eyelids off the eyeball can be obtained; the correct amount of the upper lid is enough room to clearly see the fornix where the patient may not roll his cornea out of sight; the lower lid is to be held just off the eyeball;

with a "bad squeezer" the lids should be held well off the eye.

EARLE B. FOWLER.

Reeder: A Method of Dealing with the Capsule After Cataract Operations. *Ophth. Rec.*, 1913, xxii, 184.

By Surg., Gynec. & Obst.

The author emphasizes the importance of the complete removal of the capsule after cataract operation and the difficulty of doing this by the usual methods. The method that he has devised, and for which he claims very satisfactory results, consists in making a 2 mm. incision near the border of the cornea with an eye needle. Next a small hook similar to a Tyrrel's iris hook, the curve of which is 1 mm. wide, is passed through the opening made by the needle. The point of the hook is reasonably sharp and is almost but not quite horizontal to the shaft. The hook is passed into the capsule through an opening made by the needle under the opposite border of the iris. Traction is then made on the hook until it is in the proximal margin of the iris, when the point is turned up so that it passes over the edge of the iris and through the capsule, insuring a firm hold. It is then withdrawn through the corneal incision, and the operation is complete.

EARLE B. FOWLER.

Millette: The Intracapsular Cataract Operation from the Viewpoint of an Assistant. *Ohio St. M. J.*, 1913, ix, 175.

By Surg., Gynec. & Obst.

Millette again discusses the work of the assistants in the intracapsular operation and says some operators hold this function to be almost as important as that of the operator himself. He speaks of the assistant's relation to the operator, and believes the intracapsular operations will average better vision than the capsulation method.

C. G. DARLING.

Greenwood: Sarcoma of the Choroid Not Demonstrable by the Ordinary Transilluminator. *Tr. Am. Ophth. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

Post-equatorial choroidal sarcomas are not readily demonstrated by the use of the ordinary transilluminator, and if situated far back are not at all so, and often in such cases the diaphanoscope may show nothing. If, however, the transilluminator tip could be placed at the back of the eye, such tumors would be easily demonstrated, and one object in reporting this case was to call attention to the value of the modified transilluminator devised by Lancaster.

This consists of a curved metal tube about the size of a No. 9 Theobald probe, and having in the concave surface, at the tip, a small opening through which light is projected from a small but powerful electric light. This tube, which is about two inches long, can be attached to the socket of a small pocket battery, and then the tip placed behind the eye through a small opening in the conjunctiva and Tenon's capsule.

The case reported was that of a young woman,

aged 31, who came with an eye in the stony, hard condition of absolute glaucoma, with no possibility of using the ophthalmoscope or testing the field of vision. The Wurdemann transilluminator showed nothing. A sarcoma of the choroid was suspected from the age of the patient, the severity of the glaucoma, and the lack of trouble in the other eye. An iridectomy relieved the glaucoma and when the eye cleared up it was possible to use the ophthalmoscope and see that there was a growth in the back of the eye. Using the ordinary transilluminator on the enucleated eye, an absence of light transmission was shown when the tip was held close to the optic nerve. On removing it more than 4 mm. from the optic nerve the light transmission reappeared.

Section of the eye showed a spindle-cell melanotic sarcoma of the choroid, 1 cm. in diameter, with its center exactly over the optic nerve head.

The use of a transilluminator which could be placed close to the optic nerve would have obviated, in this case, the two other operations.

Harrower: Two Cases of Chronic Glaucoma Simplex Treated by Iridotaxis. *Tr. Am. Ophth. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

The author gives an extract from Borthen's article describing Borthen's reason for operating, and a description of the operation. Borthen's results were so excellent that the author was encouraged to follow his method, which he has in the two cases reported. In both these cases the tension was reduced to normal, and the field decidedly enlarged.

In the first case, a woman of 60, the ultimate vision at the end of ten months was as good as before the operation. Tension normal, and the field enlarged. The second one was a man 59 years old; the field was decidedly enlarged, the tension reduced to normal, and the vision improved from 8/10 to 10/10. This has remained so for ten months after the operation. The author hopes to report more cases in the near future.

Wiener: Orbital Cellulitis; a Fatal Case Following Disease of the Accessory Sinuses of the Nose. *N. Y. M. J.*, 1913, xcvi, 866.

By Surg., Gynec. & Obst.

It is a well-known fact that the nose and its accessory cavities are etiologically responsible for many of the orbital and ocular complications with which we meet. Owing to the proximity of these cavities, disease is easily transmitted to the orbit, either through the vascular return, or by caries and destruction of the intervening bony wall or by way of dehiscences, gaps or defects in this structure.

The case reported is that of a merchant, 46 years of age, with an exceptionally clean history. The only feature of importance was a feeling of vague pain over the right side of the face, extending over a period of years. The acute symptoms were swelling of both eyelids on the same side, reddening of the same, intermittent pain and pain on movement of the eyeball, the whole growing worse over a period

of three weeks. Vision was normal. Examination of the nose revealed turbinate hypertrophy with a profuse, brownish, dried discharge. There was dullness on transillumination on the diseased side and no pupillary reflex, but the frontal sinus was clear. The temperature was 100.3° F. The antrum was punctured through the inferior meatus, irrigation bringing out a brown, foul-smelling mass with dirty whitish clumps. Pain was intense that night and by morning phlegmonous orbital cellulitis had set in. Operation was advised. The anterior and posterior ethmoids were broken down and filled with granulation tissue and small polypoid masses. No direct opening into the orbit was made out. The antrum was also drained. Four days later, the inflammation had progressed to such an extent that extenteration of the orbit was performed. There was marked improvement for four days, then meningeal involvement began and death came eight days after the second operation. No autopsy was performed. Culture contained streptococci.

The case brings out the gravity of chronic sinus disease and some deep questions of operative indications which the author discusses.

EARLE B. FOWLER.

Fisher: Traumatic Posterior Lenticonus. *Ophth. Rev.*, 1913, xxxii, 97. By Surg., Gynec. & Obst.

Fisher refers to the collection of reported cases by Madame Gourfein-Welt and gives her conclusions that true posterior lenticonus is diagnosable clinically on condition that two signs are satisfied: (a) deformity of the image obtained from the posterior surface of the lens, (b) the characteristic alteration in refraction of the peripheral and axial portions of the lens. He includes the possible explanations of this condition and the statement of Madame Gourfein-Welt that no reliable case of posterior lenticonus as an acquired condition has been recorded.

The case reported is that of a medical man, 40 years of age. A blow over the right malar bone left him with a black eye. Shortly after this he noted the vision in the right eye was blurring, causing difficulty with his near work. Three weeks after the accident Right V. 5/5 but only 10 Jaeger at thirty inches. Fundus and fields were normal. Diseases of the central nervous system were eliminated and a reading glass prescribed. Fifteen months later R.V. 5/36ths, with -0.5 D. Cyl. axis vertical 5/9 ths. partly. The pupils were dilated with homatropine and cocaine and examination revealed a definite protrusion of the lens at its posterior pole — an undoubted posterior lenticonus. Vision through the peripheral part of the lens 5/9 without glasses. A Catherine-wheel appearance of the retinoscopic shadow and a dull central reflex were conspicuous. Nine months later refraction was more myopic and 1 Jaeger was read at two inches without glasses. Five and one half years later the lens was completely opaque, pupil and tension normal and the field satisfactory.

The interpretation of the case appears to be that

the concussion injury had caused a minute rupture of the capsule of the lens at its posterior pole. This was so minute that at first it caused no alteration in the curvature of the lens but it had the effect of abolishing or at least reducing its power of increasing in convexity when the ciliary muscles were thrown into action. Gradually a small hernia of the lens substance through the rupture produced the posterior lenticonus so that in eleven months the striking change reported in the refraction developed and the posterior lenticonus which was recognized fifteen months after the accident explained this phenomenon. The sequel of events is sufficient to establish the accuracy of this explanation. If it be admitted as a case of true posterior lenticonus, it appears to be the first on record as an acquired condition.

EARLE B. FOWLER.

EAR

Patterson: Epithelioma of the Auricle and Cervical Glands; Removal of Auricle and Glands. *Lancet*, Lond., 1913, clxxxiv, 962.

By Surg., Gynec. & Obst.

The patient was a man aged 61. His right ear was injured six months previously. On the outer aspect there was an indurated, non-ulcerated area raised above the surface and about the size of a shilling. Under the microscope the growth showed the typical structure of an epithelioma. The glands in the upper part of the right anterior triangle were definitely enlarged and a very considerable mass lay high up underneath the sterno-mastoid muscle.

The second step in the operation was the exposure of the lateral sinus in the mastoid and the temporary occlusion of its lumen by packing ribbon gauze between this and the skull wall. Then followed the removal of the auricle, skin, and soft structures over the mastoid. The internal jugular was exposed in the neck and divided between ligatures. A large part of the sterno-mastoid muscle was removed with the glands, fascia, and the jugular vein, the vein being divided as close as possible to the base of the skull. A dissection of all of the shotty glands in the lower part of the neck was made. Deficiency of covering for the wound was made up by skin graft.

Scott made numerous applications of the X-rays as a prophylactic measure. Only eleven months have elapsed since the operation and it is therefore too early to judge of the ultimate results.

The points of interest in the case are: 1. Such extensive glandular involvement occurring in association with a comparatively limited growth on the auricle. 2. History of trauma six months previously. 3. The preliminary occlusion of the lateral sinus. This facilitates the removal of the lymphatic structure along the jugular up to the base of the skull. It prevents flooding of the wound from a nick or tear in this vessel. The author says he has not seen this method described and intends to use it in connection with the removal of enlarged glands in cases of malignant disease of the pharynx, tonsil, etc.

EARLE B. FOWLER.

Bryant: The Protective Mastoid Operation. *Tr. Am. Otol. Soc.*, 1913, May. By Surg., Gynec. & Obst.

As an adjuvant to the curative endeavors of nature, the protective mastoid operation enters into consideration when milder measures can no longer be expected to relieve the existing lesion or have failed to do so. It finds its definite indications in:

1. All cases of middle ear suppuration resistant to mild treatment, but with some residual hearing which will become progressively impaired because of the extension of ulceration and increased middle ear cicatrization associated with the destructive process.

2. Possible cases of toxic absorption due to middle ear suppuration (with or without mastoid complications) which may be the source of the toxæmia. By checking the suppuration of the ear, the protective operation destroys this nidus of infection.

3. Cases of middle ear suppuration (with or without mastoid involvement) which may be the focus of infection causing serious complications, such as brain abscess, sinus thrombosis, or meningitis.

The selection of the protective mastoid procedure in a given case of ear suppuration is called for by presumptive evidence of threatened serious complications or indications that the suppuration will not subside without this intervention, or in time to save the hearing. The true elective procedures—conservative radical, modified radical, or simple mastoid—have the object, from a pathological standpoint, to stop the suppuration; from a protective standpoint, to forestall complications; from a functional standpoint, to preserve or improve the hearing.

The several types of radical mastoid operations become "protective" in the cases of chronic middle ear suppuration because they annihilate the infectious focus of the discharging ear, which serves as the distributing center of more or less virulent pyogenic micro-organisms. At the same time they suppress the source of bacterial poisons and with it the danger of toxic absorption, permitting the restoration of the patient's normal health after the ear suppuration has been effectually controlled. While arresting the chronic middle ear suppuration, the radical mastoid operations at the same time safeguard against terminal complications such as brain abscess, sinus thrombosis, meningitis, broncho-pneumonia, nephritis, pericarditis, endocarditis, erysipelas, and bacteriæmia.

The varied technique of mastoid procedures, as devised by different writers for the radical cure of ear suppuration, is uniformly based on the common principle of obliteration of the mastoid antrum. The author's preferred technique is the one least wasteful of tissue and in his conservative radical mastoid, in cases where the middle ear structures are lost or past all functional utility, the middle ear is not curetted and no tissue is removed from it. The antrum is opened widely into the auditory canal;

the outer anterior wall of the attic is removed with its contents. The Eustachian tube is preferably kept open. The formation of a cicatricial drum-membrane is not hindered in any way. Results: Arrest of suppuration; a stable middle ear cicatricial condition; no painful dressings; a shortened convalescence; no disfigurement; and, taking into consideration the loss of the middle ear mechanism, a maximum of hearing with improvement beyond the functional capacity prior to the operation.

The modified radical mastoid operation is adapted to a radical cure of chronic middle ear suppuration when the middle ear sound transmitting mechanism is still capable of some functional activity. The operation field is approached as in the conservative radical but without obliteration of the attic, which is opened only as far as the preservation of the ossicles in position will allow. Although the results in many ways resemble those obtained in the conservative radical mastoid, the modified operation serves to shorten the convalescence, and a high degree of hearing, often above normal, may be secured in view of the fact that the persistence of a certain degree of middle ear functional capacity is a requisite for the performance of the operation. The hearing is improved beyond what it was prior to the intervention also in this operation.

In numerous cases of acute or subacute middle ear suppuration, with or without mastoid complications, the mastoid operation is called for as a protection when there is danger of the establishment of a chronic middle ear suppuration which will certainly necessitate a radical mastoid operation. The indications for the operation, in these cases, are based upon the Röntgen ray, which should be employed in all acute cases of middle ear suppuration. Arrest of suppuration, stable middle ear condition, no painful dressings, a moderately short convalescence—such are the results of the author's modified radical operation in acute cases of middle ear suppuration in solid mastoid bones. The results for the hearing are especially favorable and audition may actually become superior to the degree existing before the ear suppuration.

Infectious middle ear disease, acute or chronic, with a skiagram of pneumatic cells communicating with the antrum, calls for a protective mastoid operation in order to avert the danger from imperfect drainage during the incubation stage of a mastoid abscess or in a resolving suppuration.

The author's simple mastoid operation includes the removal of the mastoid process, the ablation of all affected bone, the removal of the available posterior osseous meatal wall between the annulus tympanicus and the facial ridge, the leveling of the edges of the bone-wound and the longitudinal section of the membranous canal along the posterior inferior wall, the closure of the posterior wound with insertion of a minor drain, followed by early removal; that is to say, his modified blood clot dressing. Convalescence in these cases is generally shortened, the hearing is often restored to normal, or above the

degree existing prior to the suppuration of the middle ear.

These mastoid operations not only comply with the command of the Nil Nocere, but in view of the results obtainable in regard to restoration of function may be classed under the heading of reconstructive surgery of the ear.

Blackwell: Exposure and Curettement of the Attic, Combined with a Modified Blood Clot as Factors in Promoting Rapid Mastoid Healing. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

The paper is based upon sixty-nine operations for mastoiditis, in all but three of which a modified form of blood clot healing was used, in an attempt to reduce the time of healing, diminish the pain of dressing and improve the appearance of the scar subsequent to mastoidectomy. In thirty-eight operations, in addition to a thorough mastoidectomy, the attic of the middle ear was exposed and curetted without disturbing the ossicular chain. This was performed by taking down the posterior bony canal wall to within one quarter of an inch of the epitympanic ring of bone and with a narrow curette removing the external attic wall, working from within outward. In each instance the attic, all of the middle ear cavity lying above the level of the epitympanic ring of bone and the horizontal facial canal, was found filled with infected tissue, which was removed, revealing the body and short process of the incus and head of the malleus lying in their normal positions. The author believes that the proximity to the clot of this infected tissue is sufficient to cause frequent infection of it and subsequent failure.

In all of the cases but three, more or less iodoform gauze was placed in the mastoid wound at the conclusion of the operation. The amount of blood used to fill the wound varied considerably with each case. Forty-two were adults, seventeen were children and ten babies. At the end of the fourth week after the operation forty-four cases were entirely healed. At the end of the sixth week all excepting three were healed. Nineteen of the cases were complicated by a perisinus abscess. Twenty-three had a subperiosteal inflammation or abscess. The dura or sinus was exposed in thirty-two cases. None died. The hearing was not impaired in those in which the attic was curetted. The external auditory canal was always packed snugly at the conclusion of the operation, in order to prevent its collapse. Nine had a chronic discharge from the ear.

The author believes, in a number of selected cases of chronic discharge from the ear with good hearing, presenting evidence of true attic suppuration only, that the operation combined with or without a blood clot, or with or without a plastic meatal flap, will preserve the hearing and remove from the ear potential possibilities of menace. Also the duration of healing after mastoidectomy is very materially shortened, the dressings are less painful,

and the subsequent scar presents a much better appearance.

Randall: A Skull Trephined for Mastoid Caries and Lateral Sinus Thrombosis. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

The specimen was given to the author shortly before the death of Dr. Ashhurst a dozen years ago, with the statement that the patient had been operated on at the Episcopal Hospital, thirty years before. The incomplete records of that date at the hospital fail to furnish substantiation or detail. The right mastoid region presents two rounded conical openings, the anterior entering the carious cavity within the mastoid; the posterior communicating with the knee of the sigmoid sulcus. Both are eroded like the whole mastoid superficies. Thirty millimeters farther back, forty-five millimeters behind the meatus and just above Reid's base-line, a button has been removed with a half-inch trephine. The inner aspect shows erosion of the lateral sulcus from near the torcular forward to the knee, where the anterior wall is gone and the sulcus merges into the carious mastoid interior. Two small openings enter the middle cerebral fossa.

The specimen tells an unmistakable story of mastoid caries opening back to form a perisinous abscess, inadequately drained by two drill-openings perfectly placed but insufficient in size. Later, for what symptoms we cannot learn, formal trephining was done to deal with the lateral sinus; but the sharp-cut opening tells that the patient did not long survive. It is very regrettable that the clinical details cannot be furnished; but this much deserves record since it dates from some ten years before any communications on the subject by Zaufal, Horsley or Lane.

Shambaugh: When to Operate on the Labyrinth in Labyrinth Infection Secondary to Purulent Otitis Media. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

Shambaugh points out that the object of operating upon the labyrinth in labyrinth infection from middle ear disease is to prevent the development of an intracranial complication or to relieve an intracranial complication after it has once developed. It is only in the severe cases of labyrinthitis, that is, in cases where there is a diffuse purulent invasion of the labyrinth, that the danger of an intracranial complication is sufficient to justify a labyrinth operation. Clinically, it is not always possible to make a diagnosis between a diffuse non-purulent (serous) labyrinthitis, with total suppression of labyrinth function, and a diffuse purulent labyrinthitis. Furthermore, the danger from diffuse purulent labyrinthitis is not always the same. Some cases are much more likely to produce an intracranial complication than others. It is not always possible to make a distinction between the cases of labyrinth empyema, where the danger of an intracranial complication is sufficient to constitute an

indication for the labyrinth operation, and other cases where this operation need not be done.

In general, one may conclude that a labyrinth operation is not called for in a case of labyrinthitis where the function of the internal ear has not been completely destroyed unless there intervene symptoms indicating an intracranial complication. The same procedure can be applied to all cases with complete destruction of the function of the internal ear, whether they occur secondary to an acute otitis media or in connection with an acute exacerbation of a chronic otitis media, provided no clearly recognized indications exist for a mastoid operation. A labyrinthitis which develops after a mastoid operation, even where it results in a complete suppression of function, may be treated in this way conservatively, unless symptoms develop indicating an intracranial extension.

On the other hand, the cases of labyrinthitis where a labyrinth operation seems to be clearly called for include:

First, cases of labyrinth suppuration where clinical symptoms exist suggesting a beginning intracranial complication, such as altered cerebro-spinal fluid, severe unilateral headache, etc.

Second, cases where the labyrinth empyema develops as a part of a violent acute panotitis, where the indications for a mastoid operation exist.

Third, cases where the labyrinth suppuration develops as a sequel to chronic purulent otitis media, where well recognized indications for a radical mastoid operation exist.

Fourth, cases where the labyrinth suppuration is complicated by erosion of the labyrinth capsule, by fistula formation into the labyrinth, by facial paralysis, or by sequestration of a part or the whole of the labyrinth capsule.

Day: Indications For and Results of Operative Treatment of Otitic Meningitis. *Surg., Gynec. & Obst.*, 1913, xvi, 369. By Surg., Gynec. & Obst.

The author has treated 57 cases of meningitis: 53 of otitic origin, 2 nasal, and 2 secondary to pneumonia. All were diagnosed as diffuse suppurative meningitis, and 38 confirmed by autopsy. Four cases recovered, 3 operative and one with vaccine therapy. Meningitis followed chronic purulent otitis and its acute exacerbation twice as frequently as the acute form. The complicating acute type was more often the explosive form, running a rapidly fatal course. Meningitis following the chronic type had a more protracted course.

The treatment of the cases varied. The mastoid operation, simple or radical, was done in 48 cases. In 33 the operation was supplemented by other procedures; 10 cases by dural drains; 8 by simple incision of dura for drainage; 4 by autogenous vaccines; 3 by drainage of cisterna magna, 1 by drainage of lateral ventricle; 1 by lavage of ventricle; 4 by

intraspinal injection of urotropin and 2 of oxycyanide of mercury.

It is impossible to establish definitely the indications for operation. The operation is not one for cure of diffuse meningitis, but to prevent suspected localization from becoming diffuse. Indications of a beginning invasion of the meninges are vague. Steady increase in blood pressure and oedema of papilla, when present, is a distinct help in diagnosis. Lumbar puncture is the most reliable information as to the condition of the meninges. Presence of pus cells or pyogenic organisms in the fluid is usually considered diagnostic. A markedly increased number of polynuclear leucocytes with the presence of pyogenic organisms indicates a hopeless condition. As now employed, lumbar puncture seldom gives warning of threatened invasion. The virulence and not the individuality of the organism determines the course of the disease, and the clinical condition of the patient offers no contra-indication to operative procedure.

The treatment of suppurative meningitis by drugs per os is absolutely valueless. There remains, then, local antisepsis, vaccine therapy, and surgical procedure.

Conclusions: Serum and vaccines are a disappointment. Drugs introduced into canal, powerful enough to overcome infection, are harmful to other organs. Dural drainage is effective to a limited extent; when used in circumscribed form it gives good results. Drainage of cisterna magna is not up to expectations, but it represents a distinct step in advance toward successful therapy. The mortality has not been changed by surgery and the successful treatment of otitic meningitis is still to be discovered. Our only hope at present is in early diagnosis.

Dench: Report of Three Cases of Otitic Meningitis Treated by Drainage of the Cisterna Magna. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

The author reports three cases of meningitis of otitic origin. In the first case a tuberculous meningitis could not be excluded clinically, although the pathological findings on the examination of the cerebro-spinal fluid, Von Pirquet's test and animal inoculation were negative. In the other cases the meningitis was unquestionably of otitic origin. In all three cases the cisterna magna was easily drained by an incision in the median line below the external occipital protuberance, the removal of bone being continued into the foramen magnum. All of the cases terminated fatally. In the opinion of the author, life may have been somewhat prolonged by the operation. It did not seem, however, that the procedure had been any more efficacious than the ordinary cerebellar decompression or decompression in the temporal region.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Sluder: Further Observations on Some Anatomical and Clinical Relations of the Sphenoid Sinus to the Cavernous Sinus and the Third, Fourth, Fifth, Sixth, and Vidian Nerves. *Tr. Am. Laryngol. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

Sluder has previously expressed his belief that many cases of migraine are either sphenoidal empyemata or nerve involvement by the extension of the inflammation or its toxins through the thin wall separating the sphenoid sinus from the adjacent nerve trunks. The results obtained during the past year strengthen this belief. From anatomical examination of specimens studied by cross section he found that the third, fourth, fifth, sixth, and Vidian frequently lie in close association with the sphenoid sinus, and his findings, except for the Vidian, were corroborated by Ladislaus Onodi. He found the sphenoid sinus separated from the clivus of Blumenbach by transparent bone in some specimens, demonstrating the association of the sixth. The early lateral spread of the sinus brings it in close proximity to the second division of the fifth at as early an age as two and one-half years. As early as the sixth year the Vidian canal is approached.

The underlying pathological process, Sluder believes, is an hyperplastic sphenoiditis. The second division of the fifth and Vidian are most frequently involved.

The medicines which have so far proved of the greatest benefit are: one per cent carbolic acid in oil, two-tenths per cent oil of wintergreen, and aqueous solution of sodium salicylate, two-fifths per cent.

EARLE B. FOWLER.

Randall: A Skull with Malformation of the Temporal Bone and Distortion and Absorption of the Basilar Region as if by Pressure of a Naso-Pharyngeal Growth. *Tr. Am. Laryngol. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

The massive edentulous skull seems that of a man of 70 years and is fairly normal on the right; but the left mastoid is represented by irregular osteophytic nodules back of which a rounded opening 2 cm. in diameter enters the lateral sulcus and the cerebellar fossa. Its smooth beveled edges mark it as of long standing, probably congenital. The basilar process of occipital and sphenoid is thinned by absorption, especially of its under surface; the back wall of the sphenoid sinus, the pterygoid, the palate, and even the upper alveolus are pressed forward on the right as is the zygoma and malar; but the nasal fossa are fairly symmetrical. The floors of carotid and auditory canals are gone on the left, possibly broken away but probably absorbed as is the bone about

the greatly enlarged lacerated foramen. Through this opening the tumor would seem to have penetrated the brain-case and caused absorption and distorted even the foramen magnum by forcing the medulla over to the right. As there is no evidence of infiltration of the bone, the growth would seem to have been non-malignant; and the displacement of the maxilla and other changes suggest action in early life—it was probably an adolescent fibroma of the vault.

Reik: The Value of Naso-Pharyngeal Surgery in the Treatment of Chronic Exudative Otitis Media. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

A report of the careful observation of thirty-four cases of chronic exudative otitis media, seen in private practice, without complications but associated with and believed to be dependent upon or still excited by some abnormality in the nose, pharynx or naso-pharynx. The purpose of the study was an answer to these two questions: What effect upon the ear can one logically expect from naso-pharyngeal surgery in such cases? And, why are so many observers skeptical of obtaining satisfactory results under similar circumstances?

The patients varied in age from 14 to 39 years and the deafness had been noted as progressing for periods ranging from six months to fifteen years. The abnormalities referred to consisted of hypertrophied turbinates, deflected septa, hypertrophied or submerged diseased tonsils, or adenoids. Careful hearing tests were made before and after operation, main reliance for the purpose of comparison being placed upon a test with a self-controlled tuning fork. The operations embraced turbinectomy, tonsillectomy, adenoidectomy and submucous resection. Analysis of the effect upon the ears, no other treatment being employed, shows immediate improvement in hearing in thirty-two; no change in two, and in no instance was the hearing rendered more defective. These tests were made within two weeks after the operation. It is also shown by tests made at later periods, varying from six months to five years from the date of operation, that this improvement was maintained in thirty cases and fell back to the former condition in two; in other words, thirty of the thirty-four were permanently benefited. The degree of improvement of hearing is not, however, considered by the author as sufficient to justify promising such patients that any of the lost hearing can be reclaimed; he considers it the most important thing to be able to say that the progress of the disease can be checked and further loss of hearing arrested.

His answer to the first question is, that simple exudative (catarrhal) otitis media, which is due to abnormal or diseased conditions in the nose or throat can be arrested in its progress by removal of these conditions; that in such cases the progressive deafness can be stopped and further loss of hearing prevented; that in some few cases the hearing power may be materially improved. Referring to the reason why some observers have been skeptical of obtaining such good results, the author states his belief that generally these disappointments have followed incomplete or improperly performed surgical procedures, and he explains the necessity for special skill and care in naso-pharyngeal operations done for the otologist. Success of the kind attained above depends upon the proper performance of naso-pharyngeal operations so that there shall be complete and thorough eradication of the abnormality without injury to neighboring normal structures.

Shambaugh: The Fauical Tonsils as a Focus for Systemic Infection. *Tr. Am. Laryngol. Ass.*, 1913, May.
By Surg., Gynec. & Obst.

The author has had rather extensive experience in cases of this sort. He believes that the faucial tonsils are much more frequently a focus for systemic infection, such as acute and chronic articular rheumatism, nephritis, acute endocarditis, and chronic cardio-vascular degenerations than is usually suspected. This relation is more thoroughly appreciated by the leading internists than by the specialists.

The author calls attention to the conditions about the faucial tonsil that he has observed in cases where these structures were clearly shown to be the focus for systemic infection. A small tonsil is as frequently the seat of such foci as is the hypertrophied tonsil. Quite frequently one can express by pressure upon the base of the tonsil a creamy exudate which is largely pus. Very often the tonsils contain foci of pus causing systemic infection where the patient is not aware that he has ever had inflammation of the tonsil. Not infrequently, too, the author has removed tonsils which were suspected as harboring foci causing systemic infection where there was no history of attacks of tonsillitis and where nothing in the appearance of the tonsil suggested tonsil trouble, and yet on their removal he has found in the depths of the tonsil pockets of pus which contained virulent streptococci. Observations of this kind have led him to be less dogmatic in asserting, from the inspection of the tonsil, that the structure may not contain foci of infection. In any case where a patient suffers from chronic focal infection and where a competent internist is unable to discover any other probable source the faucial tonsils should be suspected.

As regards the treatment of tonsils suspected of causing systemic infection, the author advises the complete enucleation. In children this is done under ether. In adults it is done preferably under a local anæsthesia: application of 5 per cent cocaine in

adrenalin, rubbed over the tonsil and the sub-mucous injection of $\frac{1}{2}$ per cent novocaine solution. The tonsil is dissected free by the use of a scalpel with a rounded tip. The tonsil is then removed with a snare. In adults a high blood pressure or a slow coagulation time are contra-indications. In these cases a slitting of the tonsillar crypts is preferred.

Clark: The Results in a Series of Cases of Tonsillectomy Three to Four Years After Operation. *Tr. Am. Laryngol. Ass.*, 1913, May.

By Surg., Gynec. & Obst.

These cases were, with three exceptions, under fifteen years old at the time of operation. To 992 requests to report, 143 cases responded in person. Only one case had post-operative hæmorrhage deserving mention. Among the reasons given for tonsillectomy were sore throat, tonsillitis, cervical adenitis, chorea, rheumatism. The ailment for which the tonsils were removed was relieved in all but a very few cases. All but twenty-four cases showed improvement in the general condition after operation. Fourteen of this twenty-four were in good general condition at the time of the operation. The lack of improvement in all but three of the remainder was due to conditions not related to the tonsils.

Since the operation, one patient has had nasal diphtheria, four have had measles, two whooping cough, one neuritis, one chorea, one bronchitis, four pneumonia (one doubtful), five abscess of the ear, and twenty-two sore throat. There has been no change in the voice or speech since the operation in 116 cases, improvement in twenty-two, and condition said to be worse in two. Enlarged cervical glands were absent in ninety-eight cases. Tonsil tissue was absent in eighty-two cases, still present on both sides in thirty-one, and on one side only in twenty-eight cases. Cases in which there was any doubt of the presence of lymphoid tissue in the fossæ were counted in the affirmative. Some of these were no doubt due to hypertrophy of an extracapsular lymphoid focus. The soft palate was symmetrical in 120 cases, asymmetrical in eighteen. In four cases the uvula had been partially or wholly excised. The faucial pillars were normal in ninety-six cases, not normal in forty-one. The pillars were considered not normal when one (or more) was absent or when anterior and posterior pillars were fused, or when one or more of them showed cicatricial contraction. The tonsil fossæ were present on both sides in 111 cases (sixteen of these shallow), and one or both absent in twenty-six. Carious teeth were noted in twenty-one cases. Three cases of enuresis were not relieved. More than half the cases who said they still had attacks of sore throat showed no tonsil tissue whatever and in many of those which showed tonsil remains it was quite obvious that the sore throat was not due to the tonsils. Of the thirty-three cases in which tonsillitis was the reason for operation, only one (an incomplete operation) was not cured. Only sixteen pa-

tients have had any definite illness since the operation. The speech was apparently unaffected by asymmetry of the soft palate or pillars or by loss of the uvula. In the two cases in which the speech was said to be not so good the palate and fauces were perfectly normal. Forty-three cases showed one or more enlarged cervical glands, but in not one of these could any symptoms be attributed to their presence. In most of the cases in which there were glands there was tonsil tissue on the same side. On the other hand, in twenty-six cases in which there were tonsil remains there were no enlarged cervical glands. Carious teeth seemed to bear a causative relation to the glands in some cases.

O'Malley: Enucleation of Tonsils and Removal of Adenoids under Gas Anæsthesia. *Brit. M. J.*, 1913, i, 699.

By Surg., Gynec. & Obst.

The article describes in detail the method of tonsil enucleation as devised by Sluder with such modifications as the author considers desirable. The use of gas is advocated where everything is convenient and trained assistants are at hand. In addition to the usual preparation for general anæsthetic, the following mixture is given one day before the operation and six days following.

Sodii salicyl.

Potass. bicarb.

Potass. chlor. aa gr. x.

Elixir aromat. (B.P.C.) m. xx.

Aq. chlorof. fl. oz. jss.

Dose 1 to 2 drachms. This is given for its local and general antiseptic action and to counteract any septic absorption from the raw surfaces.

The table is placed parallel to a window and the operator stands between, using daylight when possible. The patient is placed on his back with head turned toward the operator for the tonsillectomy and on his right side for adenectomy. The author uses a Ballenger-Sluder tonsillectome with a dull edged blade and the slot intended for the reception of the blade filled with lead so that the blade cuts against this. The instrument is inserted and the ring threaded under the lower pole of the tonsil, the handle carried to the opposite angle of the mouth and pressure exerted so that the tonsil comes to lie over the opening and bulges against the anterior pillar. The index finger of the left hand, pressing against the outer edge of the pillar, inverts the tonsil through the ring, and the blade is then closed down.

The adenoids are removed with a Gottstein's curette with a spring cage to retain the removed tissue. The removal of the tonsils requires about 4 to 5 seconds for each and the removal of the adenoids about fifteen.

EARLE B. FOWLER.

Donelan: Adhesions of Uvula and Soft Palate to Posterior Pharyngeal Wall in a Girl aged 12. *Proc. Roy. Soc. Med.*, 1913, vi, 82.

By Surg., Gynec. & Obst.

The patient was sent to the hospital because of imperfect nasal respiration. There was no history

of throat affection and there was no family history of note. A bent probe was hooked around the uvula, which became detached and shrunk to a third its former length. Suggestions as to the probable cause and the most suitable treatment were requested.

MCKENZIE said that he had operated twice on similar cases without success. The best result that he had seen was on a case in which Grant removed part of the bony palate and after the operation brought the uvula forward with a suture and attached the suture to one of the incisor teeth. Another method was to put in long rubber tubes, one in each nostril, bring them out of the mouth and attach them outside.

DESANTI referred to a case in which Spencer trans-fixed the rolled-up soft parts with a silver wire and passed the ends of this through the muco-periosteum of the hard palate. Contraction occurred in this case later but no further adhesions. He had a case ten years ago in which he used the same procedure and there had been no contraction.

ROBINSON mentioned a case he had shown in which a lead plate with silk thread at each corner had been bent and passed around the detached soft palate with two of the threads through the nose. The plate was kept in position for a fortnight.

MILLIGAN had used both rubber tubes and lead ribbons with moderate success.

POWELL said that he had obtained good results with tubing but that it should be retained for a long time to prevent readhesion.

HOVELL spoke of a case in a young woman in which he had grafted over the exposed surface part of a child's prepuce from which the skin had been removed. The result had been very satisfactory after a period of eight years.

EARLE B. FOWLER.

Grove: Certain Dangers of the Adenoid Operation. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 112.

By Surg., Gynec. & Obst.

Grove controverts the generally accepted belief that the adenoid operation is a simple and absolutely harmless procedure, and in this paper he discusses the most frequent and dangerous complications of this operation. He places them in two general groups: first, the post-operative bleeding; second, post-operative infections. His consideration of the complications in group one is dismissed with the statement that post-operative bleeding can be of a very severe nature and he quotes from the literature in two instances, recording eleven cases of fatal hæmorrhage after the adenoid operation.

The second group, the infectious complications of the adenoid operation, he considers in great detail, and takes up in his discussion the following post-operative complications: Fever, general sepsis, endocarditis, acute rheumatic fever, the acute infectious diseases of childhood, tonsillitis, adenitis, torticollis, lung infections and meningitis, and points out their casual connection with the bacterial content of the nose and naso-pharynx. The

author reports two of his own cases in which, following the adenoid operation there was, a few days later, an infection of the accessory sinuses of the nose.

In conclusion, he warns against operating when there is any infectious process present in the nose, naso-pharynx or ear, and also during local epidemics of the acute infectious diseases of childhood, especially if the patient had come into any sort of contact with children ill of these diseases. And finally, he believes that this operation should be done in a hospital, and the cases kept under observation for a considerable period of time.

GEORGE E. BEILBY.

Burgues: Direct Endoscopic Examination of the Larynx, Trachea, and Bronchi; Technique, Indications and Results (*L'endoscopie directe du larynx, de la trachée et des bronches; technique, indications, résultats*). *Thèse de doct.*, Montpellier, 1913. By *Journal de Chirurgie*.

This work states briefly the exact condition of this question and gives some original practical advice from Mouret, who edited the paper.

After describing the Killian electroscope of Brünings (bronchoscope capable of lengthening and external lighting), Burgues describes the technique of superior bronchoscopy: anæsthetization of the larynx, trachea, and bronchi with cocaine, the position of the patient and the course of the examination.

In discussing the position of the patient he insists on the one recommended by Mouret.

Laryngologists who practice superior bronchoscopy are preoccupied with obtaining obliteration of the buccopharyngeal angle by forcibly extending the head. No attention is paid to the position of the body or basin as long as the basin does not slide forward. Mouret proposes to put the patient in a position in which the trunk and basin will be bent forward. The position of the head is that which the passage of the tube forces it to take. Mouret has the patient sit astride a chair, seize the back tightly, with the anterior surface of the neck almost touching the back of the chair.

The advantages of this position are as great in cesophagoscopy as in tracheoscopy.

Burgues states that the chief indications for direct endoscopy of the trachea and bronchi are the presence of foreign particles.

A table is given of eighty-seven cases of foreign bodies in which a superior bronchoscopy was performed. Three of these cases were Mouret's. The first was a cherry stone which had lodged far down in the first branch of the left bronchus. Extraction was not possible as the foreign body could not be reached with the tube. In the second case a coffee grain was extracted from the right bronchus of a child five years old. In the third a large-headed tack, which had lodged in the left bronchus of a child of eleven years, was removed. The last two had an uneventful recovery, but the first died of a broncho-pneumonia.

A complete alphabetical index concludes this work,



Fig. 1. (Burgues.)

which is the most recent and the most complete in the French language.

E. JEANBRAU.

Sanderson: Tuberculoma of the Larynx. *Brit. M. J.*, 1913, 1, 703. By Surg., Gynec. & Obst.

McKenzie classifies tuberculous outgrowths in the region of the larynx into three groups: (1) Granular hyperplasia in connection with tuberculous ulcers, (2) papillomatous excrescences, vegetations and tumors, probably papillomatous tissue infected with tubercle bacilli and sometimes the only visible signs of tuberculosis for a considerable period; (3) true tuberculous tumors — extremely rare — composed of closely aggregated miliary tuberculous nodules, and occurring independently of infiltration and ulceration of the mucous membrane.

The first case reported is of a male 69 years old who complained of choking on lying down and difficulty in swallowing lasting over a period of three years. There was no other evidence of tuberculosis. The laryngoscope revealed a pale gray growth with a broad base and irregular surface extending from the posterior surface of the right arytenoid cartilage downward into the hypopharynx toward the œsophagus. There was no ulceration and no enlarged glands were felt in the neck. Microscopical section showed a considerable number of giant cells, epithelioid cells, and lymphocytes. A diagnosis of tuberculoma was made. The growth was removed with a cutting forceps and galvano-cautery and the surface rubbed with lactic acid. Symptoms were

relieved but returned in five months. Introduction of the forceps caused coughing-spasm and had to be given up. The patient died of exhaustion several months later.

A tuberculoma is generally covered with smooth intact mucous membrane of a pale gray to a dark red color. The disease is usually found between the ages of twenty and forty-five and is of slow growth. It is more frequent in males and is generally associated with a primary focus in the lungs. The results of treatment in a few cases of true tuberculous intralaryngeal tumor in the absence of any demonstrable lung changes have been excellent. This was due, no doubt, to the fact that operative interference and topical applications could be followed by more or less complete rest of the parts. The author then cites a case in a young woman of 25 in which recovery was complete after ten months of treatment and rest.

EARLE B. FOWLER.

Ryall: Cancer of the Tongue. *Brit. M. J.*, 1913, i, 697.

By Surg., Gynec. & Obst.

Syphilitic lesions of the tongue lower the resisting power of the organ, rendering it vulnerable to irritation of all kinds. The primary sore is occasionally found there, mucous plaques of the secondary stage are by no means uncommon, but it is especially from the later or tertiary lesions that dangerous sequelæ ensue. These tertiary lesions occur not only in cases of neglected or insufficient treatment but also where the most rigid mercurial treatment has been carried out. All cases of syphilis by no means exhibit tongue lesions and women appear to be peculiarly exempt. Correlated with the high percentage of syphilis in the histories, an equally large number are found to be smokers and very heavy smokers. The author is convinced that were the use of tobacco discontinued from the onset of symptoms of syphilis until when, after thorough treatment, the Wassermann reaction is and remains negative, tertiary manifestations in the tongue would almost cease to exist, and cancer of the tongue would be rarely seen. These patients are accustomed to having sore tongues, so when the process becomes cancerous, the seriousness of it is not appreciated. The lymphatics are early infected and as there is a free anastomosis of the lymph channels, though the growth be only on one side of the tongue, both sets of glands are usually involved. The diagnosis should be definitely established by excision and examination; anti-syphilitic treatment should not be depended upon.

The treatment is separated into three headings: (1) preventive, (2) radical, and (3) palliative. Under preventive treatment comes abstinence from tobacco for syphilitics. The treatment of all syphilitic lesions of the tongue should be carefully checked by Wassermann tests. The author considers the radical excision of the tongue necessary; this is done in two stages: first, the removal of the tongue and the dissection of glands from one side of the neck; second, the removal of the glands from the

other side. Under palliative treatment the author strongly advises the removal of the tongue even in advanced cases. He tried ligation of the linguals and external carotids in the hope of starving the growth but this was not satisfactory. He also tried the injection of the vessels with paraffin in one case; the result was good, but cure did not follow. Where the lesion is very minute a very wide removal might suffice, but the larger operation even then would be best. By an incision carried from behind the angle of the jaw along the anterior border of the sternomastoid to opposite the sterno-clavicular articulation and another from beneath the tip of the chin to meet this at right angles, the anterior triangle is first cleared of the fascia, fat, and lymphatic glands belonging to the submental, submaxillary, inferior parotid and carotid groups, taking care to prevent tearing of these, as cancer implantation followed by recurrent nodules, or, more frequently, widespread and rapid malignant induration of the whole side of the neck, might result. Drainage tubes are inserted before closing this wound, to remove blood-stained exudation or secretion from any of the salivary glands, or in case a communication is accidentally made with the oral cavity. Thereafter the mucous membrane of the floor of the mouth and the frænum is divided, allowing the tongue to be pulled forward and the lingual arteries ligatured. The tongue is divided transversely as far back as possible and the mucous membrane of the floor of the mouth sutured over the stump. M. S. HENDERSON.

Smyth: Misplaced Mandibular Canine. *Proc. Roy. Soc. Med.*, 1913, vi, 77.

By Surg., Gynec. & Obst.

The patient, a boy of 16, had a tender swelling beneath the chin. A few days later the crown of a tooth made its appearance, being directed almost vertically downward. The tooth, except for some hypoplasia of the enamel, was normal.

An examination of the mouth showed that both the right lateral incisor and cuspid were absent from their normal positions in the mandible. The history of the case brought out the fact that the child, at about three and one half years, received a blow upon the chin and that subsequently a piece of dead bone was removed. The author surmises that the presence of the sinus had directed the tooth downward.

H. A. POTTS.

Ochsner: Cleft Palate. *New Orleans M. & S. J.*, 1913, lxx, 727.

By Surg., Gynec. & Obst.

The author here reports that there has been admitted to the New Orleans Charity Hospital, between the years 1906 and 1912, twenty-two cases of uncomplicated hare-lip and fifty-four cases of hare-lip and cleft palate in children. In adults ranging in years from fourteen to thirty-two years there have been four cases of hare-lip and nine cases of hare-lip and cleft palate. In comparing the number of cases treated in other hospitals, especially by Lane and Mayo, which are greatly in excess of this

report, the author concludes that the desparity of cases treated in Louisiana does not represent the number of resident cases but that most of them do not seek surgical relief, the cause being that on account of the difficulties which the operation presents the surgeons are loath to attempt it.

The author, after citing the views of other men and quoting from Jacobson and Steward, concludes that the best time for operating is some time before the child begins to talk but drawing no hard and fast rules regarding it. As to the choice of operation, the author advocates as practiced by most men some modification of the Langenbeck operation, and when one side of the cleft projects beyond the other they are brought together with silver wire suture somewhat after the method proposed by Brophy, reducing the intermaxillary bone when it projects by resecting a portion of it.

After discussing the Brophy operation the author

gives the basic principles which underlie the operation: first, abriation of tension by absolute relaxation of flaps; second, a good blood supply to the flaps; third, a proper coaptation of broad raw surfaces.

The author favors doing the operation in two sittings, the first one comprising only the creation of the muco-periosteal flap then allowing the blood supply to regenerate when the closure can be more certainly effected. He also deprecates the subsequent use of antiseptic and dehydrating agents, also frequent examinations. He also seeks to avoid intestinal infection (post-operative) by gastric lavage, encouraging vomiting by inducing the child to drink a large amount of water.

The author believes that closure of the cleft before the child begins to talk does remedy the speech defect, and even though it be done late the defect may be overcome.

H. A. POTTS.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

The fixation of subcuticular sutures. WM. PEARSON. *Med. Press & Circ.*, 1913, cxlvi, 467.

Cauterization by means of cold. BURNIER. *Presse méd.*, Par., 1913, xxi, No. 29.

Advice to patients on leaving the hospital after surgical operations. LEONARD FREEMAN. *J. Am. M. Ass.*, 1913, lx, 1133.

After-treatment of surgical operations. C. S. HOFFMAN. *W. Va. M. J.*, 1913, vii, 325.

Systematic exercises in post-operative treatment. E. H. POOL. *J. Am. M. Ass.*, 1913, lx, 1202.

A celloidon-paraffin method for embedding and handling tissue. H. M. FRANCISCO. *Med. Rec.*, 1913, lxxxiii, 617.

Modern treatment of wounds and first aid. W. LIERMANN. *Zentralbl. f. Gewerbehyg.*, 1913, i, 121.

Aseptic and Antiseptic Surgery

Pre-operative preparation of the skin. C. G. SABIN. *Med. Sentinel*, 1913, xxi, 864.

Disinfection of the hands. SOREL. *Arch. prov. de chir.*, Par., 1913, xxii, No. 3.

Disinfection of the hands in surgery. G. APERLO. *Clin. chir.*, 1913, xxi, 331.

Disinfection of the hands by Bolus soap and paste after Liermann. KUTSCHER. *Berl. klin. Wchnschr.*, 1913, l, 629.

The employment of "bolus alba" for disinfection of the hands. GUNTHER. *Zentralbl. f. Chir.*, 1913, xl, No. 13.

The benzine toilet. ROUX. *Cor.-Bl. f. schweiz. Ärzte*, 1913, xliii, No. 16.

Iodine in surgery. MERCIER. *Union méd. du Canada*, Montréal, 1913, xlii, No. 3.

The intra-peritoneal use of tincture of iodine as an antiseptic. W. O. ROBERTS. *Louisville Month. J.*, 1913, xix, 333.

Disinfection of the skin with iodine tincture. C. GAETANO. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 257.

Anæsthetics

Modern uses of anæsthetics. W. T. DIVER. *Albany M. Ann.*, 1913, xxxiv, 208.

Vapor anæsthesia and its advantages. H. C. FALK. *Med. Rec.*, 1913, lxxxiii, 610.

Preparation of patient for general anæsthesia; selection of the anæsthetic and its application. C. S. HUNT. *Internat. J. Surg.*, 1913, xxvi, 114.

The danger and prevention of severe cardiac strain during anæsthesia. W. D. GATCH, D. GANN and F. C. MANN. *J. Am. M. Ass.*, 1913, lx, 1273. [133]

The choice of an anæsthetic in operations for acute inflammatory conditions of the abdomen. SPRENGEL. *Deutscher chir. Kong.*, 1913. [134]

General anæsthesia with lessened circulation or exclusion of the four extremities in general anæsthesia. DELAJENIÈRE. *La clinica med.*, 1913, xii, 41.

Technique in general anæsthesia for intranasal operations. H. B. GARDNER. *Proc. Roy. Soc. Med.*, 1913, vi, 51.

Intratracheal insufflation; principles and uses. J. J. FABIAN. *J. Mich. St. M. Soc.*, 1913, xii, 193.

Intratracheal ether anæsthesia. S. ROBINSON. *Clifton M. Bull.*, 1913, i, 3.

Intravenous ether anæsthesia and report of cases. E. L. SANDERSON. *New Orleans M. & S. J.*, 1913, lxv, 719.

Ethyl chloride anæsthesia. C. F. HADFIELD. *Clin. J.*, 1913, xli, 412.

Adrenalin in chloroform anæsthesia. H. T. DEPREE. *Brit. M. J.*, 1913, i, 879.

Nitrous oxide and oxygen anæsthesia. J. R. BOONE. *Ky. M. J.*, 1913, xi, 300.

Test anæsthesia in determining tolerance for scopolamine-pantopon during subsequent operation. H. HÖLDER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 380.

Scopolamine-morphine-atropine as an adjunct in inhalation anæsthesia. A. F. MORCOM. *Proc. Roy. Soc. Med.*, 1913, vi, 62.

Scopolamine-morphine-atropine as a general anæsthetic. L. E. C. NORBURY. *Proc. Roy. Soc. Med.*, 1913, vi, 57.

Local anæsthesia. HELWIG. *Klin.-therap. Wchnschr.*, 1913, xx, No. 9.

Experimental investigations on paravertebral injection of novocaine. S. MUROYA. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 1.

The history of spinal anæsthesia. G. GELLHORN. *Med. Fortnightly*, 1913, xliii, 151.

Spinal analgesia; development and present status of the method; with brief summary of personal experience in 1,065 cases. WM. S. BAINBRIDGE. *Med. Press & Circ.*, 1913, cxlvi, 334. [134]

Local anæsthesia and anæsthesia of nerve tracts. A. W. MEYER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 520.

Paralysis of the phrenic nerve in anæsthesia of the plexus. R. KLAUSER. *Zentralbl. f. Chir.*, 1913, xl, 599.

Injury of the phrenic nerve in local anæsthesia of the brachial plexus. A. E. STEIN. *Zentralbl. f. Chir.*, 1913, xl, 597.

Anæsthesia of the brachial plexus after Kulenkampf's method. BABITZKI. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 14.

Anæsthesia of the sciatic nerve. P. BABITZKI. *Zentralbl. f. Chir.*, 1913, xl, 460.

Anæsthesia of the nervi vagi and its physiological significance. ROTH. *Zentralbl. f. Chir.*, 1913, xl, 556.

Local anæsthesia by means of cataforesis. M. LUNDGREN, A. SCHÉLE and B. SVEDIN. *Hygiea*, Stockholm, 1913, lxxv, 184.

Necrosis of the tissues and hæmorrhages caused by arterial erosion following the employment of novocaine solutions for the purpose of infiltration anæsthesia. VON GAZA. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 16.

Surgical Instruments and Apparatus

Ligature and suture material; also an account of the introduction of gloves, gutta-percha and tissue and silver foil. W. S. HALSTED. *J. Am. M. Ass.*, 1913, lx, 1119.

An apparatus for illuminating the field of operation in minor surgery. L. PROCHOWNICK. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 460.

An improved oblique illuminator. J. L. MCCOOL. *Northwest Med.*, 1913, v, 109.

Improvements in the speculum. P. Z. HEBERT. *N. Y. M. J.*, 1913, xcvi, 756.

A needle-holder for submucous resection of the septum. H. B. HIRTZ. *J. Am. M. Ass.*, 1913, lx, 1295.

A new lumbar-puncture needle. J. M. WOLFSOHN. *J. Am. M. Ass.*, 1913, lx, 1204.

An automatic ligature-passing forceps. E. P. MALLETT. *J. Am. M. Ass.*, 1913, lx, 1226.

A pliant metallic litter. LE GUELINEL and DE LIGNEROLLES. *Arch. de méd. et de pharm. mil.*, Par., 1913, lxi, No. 4.

A new apparatus for the determination of foreign bodies. NAVARRO CÁNOVAS. *Arch. f. physikal. Med. u. med. Techn.*, 1913, vii, 240.

Hirtz's apparatus for the localization of foreign bodies. DODIAU. *Bull. méd. de l'Algérie*, Alger, 1913, xxiv, No. 5.

A holder for compresses adapted for use in abdominal operations. KOLINSKI. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 13.

An apparatus for cystostomized patients. BADIN and UTEAU. *J. d'urolog.*, Par., 1913, iii, No. 4.

A new instrument for loosening hard dressings, especially plaster-of-Paris casts. BLEY. *Deutsche med. Wchnschr.*, 1913, xxxix, 708.

The uses of plaster-of-Paris as a surgical dressing. H. F. GILLETTE. *N. Y. St. J. M.*, 1913, xiii, 204.

A movable table for working in plaster-of-Paris. BETTMANN. *Arch. f. Orthop., Mechanoth. u. Unfallchir.*, 1913, xii, 263.

Two new circular bone-saws. F. C. ZAPFFE. *J. Am. M. Ass.*, 1913, lx, 1285.

SURGERY OF THE HEAD AND NECK

Head

A new operation for ulcers of the scalp in an X-ray scar. A. EDDOWES. *Med. Press & Circ.*, 1913, cxlvi, 440.

Buccal opening of sub-maxillary abscesses of glandular origin. MORESTIN. *Presse méd.*, Par., 1913, xxi, No. 34.

Actinomycosis of the salivary glands. LENORMANT. *Presse méd.*, Par., 1913, xxi, No. 26.

Primary actinomycosis of the cheek. JULIAN ZILZ. *Wien. med. Wchnschr.*, 1913, lxiii, 829.

Frontal gumma and Herscheimer's reaction. LEBÉGUE. *J. sc. et. méd. de Poitiers*, 1913, v, No. 4.

Histogenesis of the inferior maxillary bone. HERPIN. *Progrès méd.*, Par., 1913, xli, No. 13.

Necrosis of the inferior maxillary bone. TORESS-TORIJA. *Rev. d. hosp.*, Juarez, Mexico, 1913, i, No. 5.

A case of adamantinoma of the inferior maxillary; presentation of the patient, of the tumor and the microscopic preparation. GORIS. *Ann. de l'inst. chir. de Bruxelles*, 1913, xx, 76.

Actinomycosis of the lower jaw; cases. W. W. GOLDEN. *W. Va. M. J.*, 1913, vii, 346.

Two cases of fracture of the jaw. ANTON WITZEL. *Deutsche Monatschr. f. Zahnk.*, Leipz., 1913, xxxi, 264.

Temporo-maxillary ankylosis. D. W. BASHAM. *Interst. M. J.*, 1913, xx, 331.

Modern bridge-protoses. FRITZ SCHENK. *Ergebn. d. ges. Zahnheilk.*, 1913, iii, 311.

Osteomyelitis of the upper jaw and its relation to empyema of the maxillary sinus. LESSING. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege*, 1913, lxviii, 63.

Radiculo-dental cysts developing at the expense of the left superior maxillary bone. HENRY and HAMEL. *Arch. méd.-chir. de Province*, Poitiers, 1913, viii, No. 3.

The diagnostic and therapeutic value of needle puncture of the maxillary sinus. H. M. GODDARD. *Penn. M. J.*, 1913, xvi, 547.

Conservation of the ethmoid. J. E. SAWTELL. *J. Kansas M. Soc.*, 1913, xiii, 139.

A preliminary report on the temporal bone and its anomalies at birth in one hundred and fifty cases. FRELIGH. *Bull. Lying-In Hosp.*, 1913, ix, 3. [135]

Subperiosteal abscess of the temporal bone without lesion of the bone; evacuative puncture; incision after Wilde; cure by second intention. CUCARELLI. *Clin. chir.*, Milano, 1913, xxi, No. 3.

Operation for fibromata of the base of the skull. D. G. MARCELLOS. *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Berl., 1913, xlvii, 274.

Subdural intracranial cyst of traumatic origin; Jacksonian epilepsy; ameliorative trepanation. JULLIARD. *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 334.

Traumatic epilepsy. MARCHAND. *Clinique*, Par., 1913, viii, No. 14.

Researches on the growth of the skull and its disturbances. THOMA. *Arch. f. path. Anat. u. Physiol. u. f. klin. Med.*, 1913, ccxii, No. 1.

Cancer of the cranial vault. LUNA and MATTEI. *Marseille méd.*, 1913, i, No. 7.

Treatment of wounds of the venous sinuses of the skull. AUVRAY. *Arch. gén. de chir.*, Par., 1913, vii, No. 3.

Bilateral pansinusitis; operation; thrombosis; meningitis; recovery. M. D. RITCHIE. *Penn. M. J.*, 1913, xvi, 550.

Diffuse glioma of the pia mater. A. M. BARRETT. *Am. J. Insan.*, Balt., 1913, lxix, 643. [135]

Researches on the relation between reactions of the kidney and early diagnosis and surgical treatment of meningitis. KOPETZKY. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege*, 1913, lxviii, No. 1.

Congenital internal hydrocephalus. I. S. HAYNES. *Ann. Surg.*, Phila., 1913, lvii, 449.

Unusual cerebral symptoms in a child of ten years. W. G. LITTLE. *J. Okla. St. M. Ass.*, 1913, v, 485.

The diagnosis of cerebral hæmorrhage by means of lumbar puncture. OLIVER P. BIGELOW. Cleveland M. J., 1913, xii, 265.

Consecutive displacement of the cerebral hemisphere in the localization and removal of intracerebral tumors and hæmorrhages. W. H. HUDSON. Ann. Surg., Phila., 1913, lvii, 492. [135]

Simplified neurology; brain localization. H. CRENSHAW. Med. Council, 1913, xviii, 129.

Case of large endothelioma of frontal region of the brain. R. L. WHITNEY. Am. J. Insan., Balt., 1913, lxix, No. 4.

Report of a case of brain tumor. E. E. MORRISON. J. Am. M. Ass., 1913, lx, 1280.

Bilateral cerebral abscess involving the motor areas. W. A. DENNIS. St. Paul M. J., 1913, xv, 153. [136]

Report of cases illustrating certain phases of cerebro-spinal surgery. STEWART RODMAN. Penn. M. J., 1913, xvi, 432. [136]

The function of the cerebellum. LUDWIG EDINGER. Deutsche med. Wchnschr., 1913, xxxix, 633.

Localization in the cortex of the cerebellar hemispheres (functional exploration and theory). ROBERT BÁRÁNY. Deutsche med. Wchnschr., 1913, xxxix, 637.

A case of tumor of the cerebellum; sudden death after lumbar puncture. A. HOUGARDY and O. KRÉMER. Ann. Soc. méd.-chir. de Liège, 1913, lii, 38.

Two cases of tumor of the ponto-cerebellar angle PALLASSE. Lyon méd., 1913, cxx, No. 16.

Surgical treatment of tumors of the cerebello-pontine angle. ARTHUR GUTTMANN. Internat. Zentralbl. f. Ohrenh. u. Rhino-Laryngol., 1913, xi, 121.

Artificial compression of the hypophysis. AUSTONI. Policlin., Roma, 1913, xx, No. 4.

Case of disease in the pituitary region. J. B. LAWFOORD. Proc. Roy. Soc. Med., 1913, vi, 58.

The effect of the removal of the hypophysis in the dog. J. E. SWEET and A. R. ALLEN. Ann. Surg., Phila., 1913, lvii, 485. [136]

New formation of nerve cells in isolated part of the nervous portion of an hypophysis tumor in acromegaly with diabetes; with a discussion of hypophysis tumors found so far. A. MEYER. Am. J. Insan., Balt., 1913, lxix, 653. [137]

Three cases of acromegaly with one autopsy. E. J. MULLALLY. Canad. M. Ass. J., 1913, iii, 269.

The present state of surgery of the hypophysis. LENORMANT. Presse méd., Par., 1913, xxi, No. 30.

Brain, with large pituitary tumor, from patient who died from hæmorrhage after partial removal of floor of sella turcica. W. HILL. Proc. Roy. Soc. Med., 1913, vi, 103.

Anatomical study of the human pineal gland. F. POLVANI. Rass. di studi psichiatr., 1913, iii, 3.

The histological structure of the pineal gland. F. K. WALTER. Sitzungsber. u. Abh. d. naturforsch. Ges. zu Rostock., 1913.

Neck

Plastic operation for a vicious cicatrix of the neck. A. MORELLE. Ann. de l'inst. chir. de Brux., 1913, xx, 65.

A case of hyomandibular fistula. H. KÜTTNER. Deutsche med. Wchnschr., 1913, xxxix, 489.

A suppurating brachial cyst. C. A. ROBINSON and G. W. THOMAS. Brit. M. J., 1913, i, 763.

Some cervical cysts of congenital origin. G. H. EDINGTON. Clin. J., 1913, xlii, 17.

Tumors of the carotid gland. N. SINJUSCHIN. Med. Rundschau, 1913, lxxix, 34. [137]

Ligation of the common carotid. F. SMOLER. Beitr. z. klin. Chir., 1913, lxxxii, 494. [138]

The thyroid and its secretion. A. N. COLLINS. St. Paul M. J., 1913, xv, 160.

The influence of insufficiency and atrophy of the thyroid gland on diseases of the joints. J. HAGEN-TORN. Chir. arch. Veliaminova, 1913, xxix, 55. [138]

The influence of artificial tracheostenosis on the thyroid gland. A. REICH and BLAUVEL. Beitr. z. klin. Chir., 1913, lxxxii, 475.

Diseases of the thyroid gland. A. MCGLANNAN. Internat. J. Surg., 1913, xxvi, 105.

Thyroidism and the clinical significance of its perversions. P. P. MARTIN. J. Indiana St. M. Ass., 1913, vi, 161.

Tuberculous thyroiditis. WEITZEL. Bull. méd., Par., 1913, xxvii, No. 34.

Follicular tuberculosis of the thyroid resembling lignous thyroid. TIXIER and SAVY. Lyon chir., 1913, ix, No. 4.

A case of tertiary syphilis of the thyroid and of the throat. PUJOL. Progrès méd., Par., 1913, xli, No. 13.

Villous goiter. VEREBELY. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Endemic goiter. W. CRESWELL HOWLE. Australas. M. Gaz., 1913, xxxiii, 327.

Goiter and its relation to its structural and physiological units. W. C. MACCARTY. Surg., Gynec. & Obst., 1913, lxi, 406.

Against the water etiology of goiter and cretinism. A. KUTSCHERA. München. med. Wchnschr., 1913, lx, 393. [138]

Exophthalmic goiter; a study of last year's work. C. MACLAURIN. Australas. M. Gaz., 1913, xxxiii, 525.

New conceptions of the pathogenesis of exophthalmic goiter. PARISOT. J. méd. franç., Par., 1913, vii, No. 3.

Exophthalmic goiter and a case of symmetrical lipomatosis. MOGGI. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 6.

Co-existing infection and sarcoma of the thyroid. M. F. PORTER. Ann. Surg., Phila., 1913, lvii, 501.

Treatment of exophthalmic goiter by chemical medications. CASTAIGNE, GOURAUD and PAILLARD. J. méd. franç., Par., 1913, vii, No. 3.

Radiotherapy and electrotherapy in the affections of the thyroid. MAINGOT. J. méd. franç., Par., 1913, vii, No. 3.

Is bilateral resection or unilateral extirpation of the thyroid preferable? A. TIETZE. Berl. klin. Wchnschr., 1913, l, 99.

Goiter from the surgical standpoint. W. LATHROP. N. Y. St. J. M., 1913, xiii, 198.

Notes upon the operative surgery of goiter. J. P. MARSH. N. Y. St. J. M., 1913, xiii, 195.

The present technique of operations for goiter. ALAMARTINE. Rev. de chir., Par., 1913, xxxiii, No. 4.

Surgical treatment of exophthalmic goiter. DUJARIER. J. méd. franç., Par., 1913, vii, No. 3.

Thyroidectomy in cancer of the thyroid. LE JEMTEL. Arch. méd.-chir. de Normandie, Le Havre, 1913, iv, No. 4.

Fever in Basedow's disease and in aortitis. B. GRAZIADEI. Riv. crit. di clin. med., 1913, xiv, 193.

The clinical forms of Basedow's syndrome. SAINTON. J. méd. franç., Par., 1913, vii, No. 3.

Iodism and Basedow's disease. LEDOUX and TISSERAND. Progrès méd., Par., 1913, xli, No. 15.

Cerebellar symptoms in myxedema. G. SÖDERBERGH. Nord. med. Ark., Stockholm, 1913, xlv, 1.

The technique of excision of cervical ribs. A. S. B. BANKART. Lancet, Lond., 1913, clxxxiv, 962.

SURGERY OF THE CHEST

Chest Wall and Breast

Two cases of funnel breast. H. E. FRUEHWALD. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvi, 13.

Cause of the absence of the muscles of the breast and of the mammary gland. WALTHER. Arch. f. path. Anat. u. Physiol. u. f. klin. Med., 1913, ccxii, No. 1.

Contribution to our knowledge of mammary hypertrophy. A. J. JUHLE. Nord. med. Ark., Kirurgi, 1913, xlv, No. 2.

Primary carcinoma of the nipple. B. F. SCHREINER. Buffalo M. J., 1913, lxviii, 509.

Inoperable primary carcinoma of the breast. G. E. PFAHLER. N. Y. M. J., 1913, xcvi, 853.

Melanotic sarcoma of the right anterior thoracic wall, associated with a metastasis in the lumbar spinal cord and generalized sarcomatosis. T. LAURENTI. Gazz. med. di Roma, 1913, xxxix, 170.

The technique of artificial pneumothorax. SOPHUS BANG. Beitr. z. Klin. d. Tuberkul., 1913, xxvi, 293.

Treatment of pulmonary collapse, with special consideration of artificial pneumothorax. A. SCHERER. Med. Klin., 1913, ix, 537.

Three cases of death and autopsy after treatment of pulmonary tuberculosis by artificial pneumothorax. CARL SUNDERG. Beitr. z. Klin. d. Tuberkul., 1913, xxvi, 303.

Congenital thoracic deformity. F. G. CROOKSHANK and SIDNEY BOYD. Proc. Roy. Soc. Med., 1913, vi, 152.

Chondrocostal and chondrosternal tuberculous arthritis. R. LOZANO. Clin. moderna, Madrid, 1913, xii, 185.

Remarks on the scaphoid scapula and its syndrome; the connection with syphilis in the ascendants. M. W. GRAVES. J. Cutan. Dis., 1913, xxxi, 241.

Cracking of the scapula. LOBENHOFFER. Beitr. z. klin. Chir., 1913, lxxxiii, No. 3.

A case of fracture of the scapula. FREERE. Bull. Ass. méd. belge d. accidents du travail, Brux., 1913, ix, No. 6.

A study of empyema, with special reference to the feasibility and importance of dependent drainage. THOMAS. Am. J. M. Sc., 1913, cxlv, 555. [139]

The surgical treatment of pleural empyema with especial reference to after-treatment by aspiration. W. LAWROW. Beitr. z. klin. Chir., 1913, lxxxiii, 67. [140]

Tuberculous mediastinitis associated with hæmorrhagic pleurisy, compression of the superior vena cava and right-sided hemiplegia. SOREL. Province méd., Par., 1913, xxvi, No. 17.

Trachea and Lungs

A case of combined stenoses of the trachea. FRITZ SCHLEMMER. Monatschr. f. Ohrenheilk. u. Laryngorhinol., 1913, xlvii, 322.

Experimental surgery of the trachea. CIRO CALDERA. Arch. f. Laryngol. u. Rhinol., 1913, xxvii, 334.

Tracheo-bronchoscopy in diagnosis and treatment. W. E. GROVE. Wis. M. J., 1913, xi, 346.

Report of a case of bronchoscopy for multiple foreign bodies (almond shell and pulp) in a child two years of age, with some observations upon bronchoscopy in infants and young children. J. R. WINSLOW. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 125.

Foreign body in the left bronchus; extraction by bronchoscopic procedure; secondary œdema of the glottis

necessitating tracheotomy. SAVIN. J. Sc. et méd. de Poitiers, 1913, v, No. 3.

A pin impacted in the bronchial bifurcation. SARGNON and VIGNARD. Lyon méd., 1913, cxx, No. 15.

Bronchoscopy and œsophagoscopy. A. E. BULSON. J. Indiana St. M. Ass., 1913, vi, 150.

Surgical treatment of pulmonary emphysema. ADAM MAJEWSKI. Przegl. chir. ginek., 1913, viii, 100. [140]

Pulmonary embolism. JOS. A. MACLAY. J. M. Soc. N. J., 1913, ix, 555.

Studies of obturating pulmonary embolisms as post-operative cause of death. GUSTAF PRTRÉN. Lunds Univ. Arsskrift, 1913, ix, 1.

Suppurative cyst of the lung, opening into the bronchi and filling with gas under pressure. DUVERGEY. Gaz. hebdom. d. sc. méd. de Bordeaux, 1913, xxxiv, No. 15.

Complications and special clinical manifestations of lung tumors. A. FRAENKEL. Med. Klin., 1913, ix, 572.

Surgery of pulmonary tuberculosis. J. DANES. Bol. de colegio de med. de Gerona, 1913, xviii, 2.

Medical aspects of pulmonary surgery. H. R. M. LANDIS. Penn. M. J., 1913, xvi, 524.

Heart and Vascular System

Radiological examination of the heart. LEBON and AUBOURG. Presse méd., Par., 1913, xxi, No. 30.

Two cases of penetrating wound of the heart. E. DE VERTEUIL. Brit. M. J., 1913, i, 764. [140]

The surgery of the heart and pericardium. J. RAE. Universal M. Rec., 1913, iii, 301.

Aneurism of the aorta and of the brachiocephalic ramus. BADETTI, MATTEI, REBOUL and LACHAUX. Marseille méd., 1913, l, No. 7.

Intrathoracic aneurism. DE HAVILLAND HALL. Lancet, Lond., 1913, clxxxiv, 945.

Pharynx and Œsophagus

Foreign bodies in the air passages and the œsophagus. R. H. T. MANN. J. Kansas M. Soc., 1913, xiii, 155.

A foreign body borne by the œsophagus without notable reaction for twenty-seven years. LIEBAULT. Rev. hebdom. de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 14.

A case of foreign body in the œsophagus associated with œsophago-tracheal fistula. SCHOUBOE. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxviii, No. 1.

Report of a case of stricture of the œsophagus. E. J. MELVILLE. Internat. J. Surg., 1913, xxvi, 126.

Membranous strictures of the œsophagus of obscure etiology. W. LERCHE. J. Am. M. Ass., 1913, lx, 1210.

Congenital stricture of the lower end of the œsophagus; case treated by gastrostomy, followed by dilatation of the stricture through the œsophagoscope. R. MORISON. Lancet, Lond., 1913, clxxxiv, 1021. [141]

Congenital stenoses of the œsophagus. GUISEZ. Presse méd., Par., 1913, xxi, No. 27.

Cicatricial stenosis of the œsophagus. PELFORT. Rev. de l. hosp., Montevideo, 1913, vi, No. 1.

Early diagnosis of cancer of the œsophagus; a new technique of X-ray examination. A. BASSLER. J. Am. M. Ass., 1913, lx, 1283. [141]

A method of treating carcinoma of the œsophagus. W. STEUART. Arch. Rönt. Ray, 1913, xvii, 414.

The plastic repair of the œsophagus. VON FINK. *Zentralbl. f. Chir.*, 1913, xl, 545. [142]
 Œsophagoplastic surgery. J. O. HALPERN. *Chirurgia*, St. Petersburg, 1913, xxxiii, 114.

Miscellaneous

The technique of thoracic operations. W. W. BABCOCK. *Penn. M. J.*, 1913, xvi, 532.

The surgical aspects of those diseases of the thorax which are amenable to surgical intervention. S. ROBINSON. *Penn. M. J.*, 1913, xvi, 527.
 Intrathoracic tumors. J. SAILER and R. G. TORRY. *Penn. M. J.*, 1913, xvi, 539.
 Endoscopic diagnosis and treatment of endothoracic tumors. EPHRAIM. *Berl. klin. Wchnschr.*, 1913, l, No. 15.

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

Transverse incisions in abdominal surgery. VERHOGEN. *J. méd. de Bruxelles*, 1913, xviii, 125.

A cystic tumor of the abdominal wall. H. WOLLIN. *Prag. med. Wchnschr.*, 1913, xxxviii, 205.

Ligneous phlegmon of the abdominal wall. W. W. GRANT. *J. Am. M. Ass.*, 1913, lx, 1039. [142]

An investigation into the nature of abdominal rigidity. T. W. WADSWORTH. *Med. Press & Circ.*, 1913, cxlvi, 413.

So-called umbilical calculi. ROBERT HERZENBERG. *Deutsche med. Wchnschr.*, 1913, xxxix, 706.

Large retroperitoneal abscess of uncertain origin; drainage by the groin. T. TURNER THOMAS. *Med. Times*, 1913, xli, 109.

Peritoneal adhesions of the insidious toxic group. R. T. MORRIS. *Med. Rec.*, 1913, lxxxiii, 645.

Treatment of peritoneal wounds. B. J. KAMVER. *Nederland. Tydschr. v. Verloosk. en Gynec.*, 1913, No. 3, 137.

Diffuse and general peritonitis with a plea for early diagnosis. H. M. HAYES. *Illinois M. J.*, 1913, xxiii, 385.

The frequency of gonococcic peritonitis in young girls affected with vulvo-vaginitis. TRIDON. *Gynécologie*, Par., 1913, xvii, No. 3.

Is there a biliary peritonitis without perforation of the bile-ducts? NAUWERCK and LÜBKE. *Berl. klin. Wchnschr.*, 1913, l, No. 14.

Fatal peritonitis due to infection with bacillus coli. A. L. GROVER. *J. Am. M. Ass.*, 1913, lx, 1297.

An extraordinary case of tuberculous peritonitis. E. EDÉN. *Upsala Läkaref. Föhr.*, 1913, xviii, 157.

The operative treatment of tuberculosis of the peritoneum. HOEVEL. *Zentralbl. f. Chir.*, 1913, xl, 466. [142]

Circumscribed post-typhoid peritonitis opening into the intestine. PELFORT. *Rev. de l. hosp.*, Montevideo, 1913, vi, No. 2.

Generalized post-operative peritonitis. COLIN. *J. de méd. de Bordeaux*, 1913, xliii, No. 14.

Free transplantation of the peritoneum. HOFMANN. *Zentralbl. f. Chir.*, 1913, xl, No. 13.

Properitoneal hernia. W. C. G. KIRCHNER. *Am. J. Obst.*, N. Y., 1913, lxvii, 690.

Hernia diaphragmatica or unilateral high dystopia of the diaphragm? REUSS. *Deutsche med. Wchnschr.*, 1913, xxxix, 743.

Subphrenic abscess. G. BAGOZZI. *Clin. chir.*, 1913, xxi, 1. [143]

Embryonic diaphragmatic hernia. CORSY and MORROUD. *Marseille méd.*, 1913, l, No. 7.

A case of hernia diaphragmatica in an adult phthisical patient. LAURITZ MELCHIOR. *Beitr. z. Klin. d. Tuberkul.*, 1913, xxvi, 263.

Fat hernia in the linea alba. H. MATTHEY. *Iowa M. J.*, 1913, xix, 508.

Lateral ventral hernias. ENRICO CARTOLARI. *Gazz. internaz. di med., chir.*, 1913, 250.

Epigastric hernia. LUCIEN THIRIAR. *Clinique*, Brux., 1913, xxvii, 225.

The development of hernia pectinea. HARZBECKER. *Deutsche med. Wchnschr.*, 1913, xxxix, 744.

Some of the medico-legal aspects of inguinal hernia. T. T. JACKSON. *Tex. St. J. Med.*, 1913, viii, 330.

Herniology of inguinal hernia. F. EHLER. *Čas. česk. lék.*, Prague, 1913, lii, No. 1. [143]

Rare inguinal hernias. K. TSCHEREPNIN. *Deutscher chir. Kong.*, 1913.

A new plastic aponeurotic method for the cure of direct inguinal hernia. C. SANTINI. *Boll. d. sc. med.*, Bologna, 1913, lxxxiv, 201.

A single transverse incision for use in double inguinal herniotomies. E. S. JUDD. *Old Dominion J.*, 1913, xvi, 153. [144]

Hernia of the cæcum and the appendix; a double, direct and oblique sac in the same inguinal hernia. LÉPOUTRE and WILLIATTE. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 16.

Laceration of the mesentery in strangulated hernia. TOURNEUX and STILLMUNKS. *Progrès méd.*, Par., 1913, xli, No. 15.

Three cases of isolated hernia of the appendix. GRIMOUD. *Sud méd.*, Marseille, 1913, xlv, No. 1958.

Bilocular hernia. V. L. SCHRAGER. *Surg., Gynec. & Obst.*, 1913, lxi, 359.

Report of the radical operative cure of a double obturator hernia. C. VAN ZWALENBURG. *Surg., Gynec. & Obst.*, 1913, xvi, 422.

Röntgen ray exploration of hernias. BARON and BARSONY. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Accidents of hernia operation. D. R. KATHAN. *N. Y. St. J. M.*, 1913, xiii, 200.

The treatment of large herniæ. A. E. BARKER. *Lancet* [146]

Function of the great omentum. M. STUZER. *Med. Rundschau*, 1913, lxxix, 70. [147]

Obliteration of the mesenteric vessels; experimental investigations and clinical observations. NICOLA LEOTTA. *Policlin.*, Roma, 1913, xx, 94.

Primary tuberculosis of the mesenteric glands from the surgical point of view. BJORN FLÖDERUS. *Allmänna Svensk. Läk.-Tid.*, 1913, x, 233.

A malignant adenomyoma of the mesentery. EUGEN LUDWIG. *Zentralbl. f. Path. u. path. Anat.*, 1913, xxiv, 289.

Cystic lymphangioma of the mesentery. RONA. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Surgical diseases and injuries of the mesentery and the omentum. PRUTZ and MONNIER. *Deutsche Chir.*, 1913, lxxi, 406.

Co-existence of a false and a true Meckel's diverticulum. CORSY and MOIROUD. *Marseille méd.*, 1913, 1, No. 7.

Inflammatory affections which start from acquired diverticuli of the sigmoid flexure. CARL EISENBERG. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 627.

Diverticulitis. JOS. STANTON. *Boston M. & S. J.*, 1913, clxviii, 343. [147]

The urachus as a factor in intestinal obstruction, with report of a case. C. M. NICHOLSON. *Lancet-Clin.*, 1913, cix, 285. [148]

Gastro-Intestinal Tract

Röntgenological diagnosis of affections of the stomach. EHRENREICH. *Berl. klin. Wchnschr.*, 1913, 1, No. 16.

Instantaneous radiography of the stomach. G. W. GRIER. *Pittsburgh M. J.*, 1913, 1, 42.

The results obtained by X-ray exploration in ulcer ventriculi. EMMO SCHLESINGER. *Zentralbl. f. Chir.*, 1913, xl, 511.

Vicious circle after gastro-jejunosomy as demonstrated by the Röntgen ray. H. W. VAN ALLEN. *Am. J. Gastro-enterol.*, 1913, ii, 8.

Technique and results of gastro-intestinal röntgenology. HESSE. *Ztschr. f. Röntgenk. u. Radiumforsch.*, Leipzig, 1913, xv, Nos. 4-5.

Burns of the stomach caused by ingestion of acids. DELORE and ARNAULD. *Rev. de chir., Par.*, 1913, xxxiii, No. 4.

Acute post-operative dilatation of the stomach and its pathogenesis. ARCANGELI. *Clin. chir., Milano*, 1913, xxi, No. 3.

A picture of a diverticulum of the stomach, without corresponding loss of any portion of the stomach wall. M. GUILLOT. *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxiv, 222. [148]

Tuberculosis of the stomach. DENIS B. ZESAS. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, 448.

Lesions of the muscles of the stomach secondary to perigastritis; their relations to disturbances of gastric peristalsis. BERIEL and GARDERE. *Lyon chir.*, 1913, ix, No. 4.

A case of double stenosis of the stomach. KARPLUS and URY. *Allg. med. Zentral-Ztg.*, 1913, lxxxii, 175.

Acute occlusion in a bilocular stomach. CLÉMENT. *Marseille méd.*, 1913, 1, No. 7.

Callous ulcer involving the entire stomach; excision; with comments on complete loss of stomach and the technique of stomach resection. F. SASSE. *München. med. Wchnschr.*, 1913, lx, 650. [148]

Gastric ulcer. E. E. CORNWALL. *N. Y. M. J.*, 1913, xcvi, 811.

The singularity of gastric ulcer. J. C. JOHNSON. *Am. J. Gastro-enterol.*, 1913, ii, 1.

Gastric ulcer in the new-born. VON MIELECKI. *Berl. klin. Wchnschr.*, 1913, i, 564.

Traumatic ulcer of the stomach; pyloric cancer. LOPEZ. *Riv. ibero-americana de cienc. med.*, 1913, xxix, 151.

Etiology and treatment of gastric ulcer. M. KATZENSTEIN. *Zentralbl. f. Chir.*, 1913, xl, 509.

Pylorospasm and gastric ulcer. A. NEUDORFER. *München. med. Wchnschr.*, 1913, lx, 760.

Dieting and the fats in ulcer of the stomach. PLICQUE. *Bull. méd., Par.*, 1913, xxvii, No. 33.

Benign tumors of the stomach. TYOVITY. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Diagnosis and treatment of cancer of the stomach from the viewpoint of the internist. LIPOWSKI. *Würzburg. Abhandl. a. d. Gesamtgeb. d. prakt. Med.*, 1913, xiii, 143.

Total resection of the stomach. E. UNGER. *Zentralbl. f. Chir.*, 1913, xiv, 515.

Modifications of Roux's gastro-jejuno-oesophagostomy. UFFREDUZZI. *Arch. gén. de chir., Par.*, 1913, vii, No. 3.

Congenital hypertrophic stenosis of the pylorus with report of three cases. J. B. EAGLESON. *Northwest Med.*, 1913, v, 89.

A case of perforating pyloric ulcer. E. KLOFFER. *St. Petersb. med. Wchnschr.*, 1913, xxxviii, 60.

Indications and technique of exclusion of the pylorus. BORSZEKY. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

The permanent results obtained with ligation of the pylorus with omentum and fascia. KOLB. *Deutscher chir. Kong.*, 1913. [149]

Gastro-entero-anastomosis and exclusion of the pylorus in the treatment of gastric ulcer associated with stenosis of the pylorus. BALDO ROSSI. *Morgagni*, 1913, lv, 289.

Duodenal ulcer. KÜTTNER. *Deutscher chir. Kong.*, 1913. [149]

Duodenal ulcers. VALLADAO. *Gaz. clin., Sao Paulo*, 1913, xi, No. 5.

Round ulcer of the duodenum in the first year of life. WALTHER SCHMIDT. *Berl. klin. Wchnschr.*, 1913, 1, 593.

Perforated duodenal ulcer. N. JACOBSON. *N. Y. St. J. M.*, 1913, xiii, 179.

Perforating duodenal and gastric ulcers. G. D. GREGOR. *N. Y. St. J. M.*, 1913, xiii, 183.

Papillary tumors and juxta-papillary tumors of the duodenum. P. BINDA. *Gazz. med. ital.*, 1913, lxiv, 61.

Duodenal motility. P. EISEN. *Wis. M. J.*, 1913, xi, 316. [150]

Jejunal and gastro-jejunal ulcers. R. P. ROWLANDS. *Guy's Hosp. Gaz.*, 1913, xxvii, 149. [151]

Primary cancer of the jejunum and ileum. B. CARLSON. *Hygiea, Stockholm*, 1913.

Intestinal obstruction. A. BONNER McCONNELL. *Am. J. Obst., N. Y.*, 1913, lxvii, 665.

Intestinal obstruction. G. L. STIRLING. *New Orleans M. & S. J.*, 1913, lxv, 749.

High intestinal obstruction, post-operative ileus and acute pancreatitis. J. E. SWEET. *Penn. M. J.*, 1913, xvi, 520.

Pathogenesis of congenital intestinal atresias. H. FORSSNER. *Zentralbl. f. Chir.*, 1913, xl, 193.

Etiology, symptomatology and pathogenesis of acute intestinal strangulation. ANDREAS POLACCO and ALFRED NEUMANN. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 42.

Some considerations on intestinal invagination. FAULON, MARNAY and GUILLAUMELOUIS. *Arch. méd.-chir. de Province, Poitiers*, 1913, viii, No. 3.

Progress in the diagnosis and treatment of intussusception. W. E. LADD. *Boston M. & S. J.*, 1913, clxviii, 542. [151]

Spastic paralytic ileus. R. M. GREEN, F. S. KELOGG and P. L. HARVIE. *Boston M. & S. J.*, 1913, clxviii, 580. [152]

Report of a case of faecal impaction in the ileum for fifty-three days with recovery. R. H. HARRIS. *J. Am. M. Ass.*, 1913, lx, 722. [152]

A case of ileus caused by obliteration by a Meckel's diverticulum. GERTRUD BIEN. *Wien. med. Wchnschr.*, 1913, lxiii, 824.

Ileus caused by gall-stones. POUL MÖLLER. *Hosp.-Tid., Kjøbenhavn*, 1913, vi, 297.

Acute embolic enteritis. HART. *Arch. f. Verdauungs-Krankh., Berl.*, 1913, xix, No. 2.

Multiple intestinal perforations occurring in the course of a late relapse of typhoid fever. PELLOU and GALLAND. *Paris méd.*, 1913, No. 20.

The early diagnosis of intestinal cancer. F. H. NICHOLS. *N. Y. St. J. M.*, 1913, xiii, 190.

A case of primary sarcoma of the small intestine. R. PATEK. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 414. [153]

Vegetative adenomata of the superior portion of the small intestine simulating pyloric stenosis. H. HARTMANN. *Presse méd.*, 1913, xxi, 241. [153]

The treatment of gastric and intestinal hæmorrhages. I. BOAS. *Berl. klin. Wchnschr.*, 1913, l, 621.

Contraction of intestinal anastomotic opening with extensive abdominal adhesions; cæcal fistula. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 2. [154]

Resection of the intestine in a rare variety of strangulated crural hernia. NICOLINO FEDERICI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 480.

A rare indication for intestinal resection. C. SULTAN. *München. med. Wchnschr.*, 1913, lx, 761.

Experimental devascularization of the intestine with and without mechanical obstruction. J. S. HORSLEY and C. C. COLEMAN. *Ann. Surg., Phila.*, 1913, lvii, 506. (Abst. p. 259, vol. xvi.)

The question of cæcum mobile. A. SCHMIDT. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 639.

Anthrax tumor of the cæcum. E. SCHMIDT. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 728.

Etiology of Lane's kink, Jackson's membrane and cæcum mobile. F. G. CONNELL. *Surg., Gynec. & Obst.*, 1913, xvi, 353. [154]

The foetal peritoneal folds of Jonnesco, Treves, and Reid, and their probable relationship to Jackson's membrane and Lane's kink. J. R. EASTMAN. *Surg., Gynec. & Obst.*, 1913, xvi, 341. [155]

The vermiform appendix in the Röntgen picture. COHN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 13.

Diverticuli and cysts of the appendix. BÉRAUD and VIGNARD. *Province méd., Par.*, 1913, xxvi, No. 15.

Hydro-appendix. DUROUX. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xx, No. 2.

Actinomycosis of the appendix. HUTTL. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Appendicitis ex oxyure. RHEINDORF. *Med. Klin.*, 1913, ix, 53. [156]

A case of appendicitis due to oxyuris. GARIN and CHALIER. *Lyon chir.*, 1913, ix, No. 4.

Appendicitis and B. paratyphus. MERREM. *Deutsche med. Wchnschr.*, 1913, xxxix, 690.

Phlebolith and appendicitis simulating ureteral calculus. HOWARD LILIENTHAL. *Med. Herald*, 1913, xxxii, 139.

Chronic appendicitis. A. KRECKE. *München. med. Wchnschr.*, 1913, lx, 562.

Shifting of Arneth's blood-sign to the left in chronic appendicitis. W. A. SAMOILO. *Chirurgia, St. Petersburg*, 1913, xxxiii, 200.

Appendicitis in women. FONYO. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Appendicitis; with report of fatal cases. E. S. ALLEN. *Ky. M. J.*, 1913, xi, 313.

A fatal case of appendicitis. R. S. E. TODD and B. BRADLEY. *Australas. M. Gaz.*, 1913, xxxiii, 300.

Tetany in acute suppurative appendicitis in an adult. B. HUGHES. *Brit. M. J.*, 1913, i, 879.

Appendicitis and pulmonary tuberculosis. AUBRY. *Gaz. méd. de Nantes*, 1913, xxxi, No. 17.

Epigastric pains in appendicitis. SANTE SOLIERI. *Rev. de chir., Par.*, 1913, xxxiii, No. 4.

Retrocæcal appendicitis. J. N. JACKSON. *J. Am. M. Ass.*, 1913, lx, 1285. [156]

Complication of a case of appendicitis by abscesses in the liver. S. LASTOTCHKIN. *Sibirische Arzteztg.*, 1913, vi, 146.

Diagnosis of chronic appendicitis, rendered precise and confirmed by radiography. DEPUY and FRENELLE. *Par. chir.*, 1913, v, No. 1.

The technique of appendectomy. BERTELSMANN. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 158.

The surgical aspect of appendicitis. G. P. GRIGSBY. *Ky. M. J.*, 1913, xi, 286.

Megacolon. A. NAVARRO. *Bull. et mém. soc. de chir. de Par.*, 1913, xxxix, 444.

Primary typhlitis. OBALL. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Grave hæmorrhagic dysenteric colites; their differential diagnosis and surgical indications. MATHIEU. *J. d. praticiens, Par.*, 1913, xxvii, No. 15.

Colitis ulcerosa: its etiology, diagnosis and treatment. JAKOW KAPLAN. *Prag. med. Wchnschr.*, 1913, xxxviii, 127.

The radical treatment for cancer of the colon. L. KRYNSKI. *Przegl. chir. i ginek.*, 1913, viii, 148.

Complete non-descent of the colon and cæcum in the adult. W. C. BORDEN. *Va. M. Semi-Month.*, 1913, xviii, 1.

Late conditions after exclusion of the large intestine by anastomosis between the ileum and sigmoid flexure. VON BECK. *Zentralbl. f. Chir.*, 1913, xl, 602.

Extensive resection of the large intestine for stricture producing hypertrophic tuberculosis. GIOVANNI RAZZABONI. *Clin. chir.*, Milano, 1913, xxi, 561.

An attempt at surgical treatment of intestinal bilharziasis by evisceration and high resection of the anorecto-sigmoid mucous membrane. LEGRAND. *Rev. méd. d'Égypte*, 1913, i, 10.

Operative treatment of the ulcers of the sigmoid flexure and rectum. A. RYDYGIER. *Przegl. chir. i ginek.*, 1913, viii, 54.

Hæmorrhages caused by polypi of the rectum. MOCQUOT. *Rev. de chir., Par.*, 1913, xxxiii, No. 4.

Electricity in rectal diseases. F. H. WILLIAMS. *N. Y. M. J.*, 1913, xcvi, 875.

Prolapse of the rectum. D. FIESCHI. *Clin. chir.*, 1913, xxi, 375. [157]

A practical anal bandage and a bandage for prolapse of the rectum. DECKER. *München. med. Wchnschr.*, 1913, lx, No. 15.

Modification of the combined method of operation for cancer of the rectum. DAHLGREN. *Zentralbl. f. Chir.*, 1913, xl, No. 13.

Operation when required, in all common rectal diseases, without general anaesthesia or pain. W. F. BURROWS. *N. Y. M. J.*, 1913, xcvi, 862.

Anal imperforation in the new-born. GROSSE. *Gaz. méd. de Nantes*, 1913, xxxi, 16.

Extra-anal, bloodless treatment of hæmorrhoids. JOSEF MAYBAUM. *Arch. f. Verdauungs-Krankh.*, 1913, xix, 188.

Radical cure of hæmorrhoids; a simple and rapid procedure. DELAUNAY. *Par. chir.*, 1913, v, No. 1.

Hæmorrhoid operations. L. WATSON. *N. Y. M. J.*, 1913, xcvi, 755.

A new operation for hæmorrhoids. ROBERT A. BACHMANN. *J. Am. M. Ass.*, 1913, lx, 1154.

Radiology of the digestive tube. DE BOISSIERE. *Arch. méd.-chir. de Normandie, Le Havre*, iv, No. 3.

Fluoroscopy of the gastro-intestinal canal. SKINNER. *Lancet-Clin.*, 1913, cix, 234. [157]

The influence of various contrast substances on the motility of the intestinal canal. F. GROEDEL. *Arch. Rönt. Ray*, 1913, xvii, 420.

The Einhorn bead test for the estimation of digestion. W. G. MORGAN. N. Y. St. J. M., 1913, xiii, 207.

Liver, Pancreas and Spleen

Non-parasitic cysts of the liver. SIDNEY BOYD. Lancet, Lond., 1913, clxxxiv, 951. [157]

Hepatic abscess caused by an ascaris lumbricoides. NOWICKI. Zentralbl. f. allg. Path. u. path. Anat., 1913, xxiv, 295.

The advantages of the combined abdominal and transpleural operative technique for liver abscess. W. L. BROWN. New Mexico M. J., 1913, x, 11.

Angioma of the anterior surface of the liver; removal after hepatic resection; cure. P. DELBET. Par. chir., 1912, iv, No. 10. [158]

A case of primary carcinoma of the liver in a nursing. G. IDZUMI. Arch. f. klin. Chir., 1913, c, 1181.

Primary nodular cancer of the liver. ESCANDE, BADETTI and MATTEI. Marseille méd., 1913, l, No. 7.

Massive adenoma of the liver. DÉVÉ. Normandie méd., Rouen, 1913, xxix, April.

Primary chorio-epithelioma of the liver. FISCHER. Frankf. Ztschr. f. Path., Wiesb., 1913, xii, 399.

Observations on surgery of the liver and bile passages. J. G. SHERRILL. Louisville Month. J., 1913, xix, 321.

A case of total resection of the left lobe of the liver because of siphiloma. GIACOMO DE FRANCISCO. Clin. chir., Milano, 1913, xxi, 573.

Gall-stone disease; medical treatment. WM. BAIN. Practitioner, Lond., 1913, xc, 538. [158]

Solubility of gall-stones. VON HANSEMAN. Arch. f. path. Anat. u. Physiol. u. f. klin. Med., 1913, ccxii, 139.

A discourse concerning the bile. H. ROGER. Universal M. Rec., 1913, iii, 289.

Quantitative chemical analysis of human bile. J. ROSENBLOOM. J. Biol. Chemistry, 1913, xiv, No. 3.

A review of 2000 operations on the bile passages; a comparison of the results in the first and second thousand. KEHR. Deutscher chir. Kong., 1913. [159]

Laparotomy in operations on the bile-ducts. N. P. ERNST. Hosp.-Tid., Kjøbenhavn, 1913, vi, 385.

Biliary lithiasis; calculi of the gall-bladder and of the cystic duct; operation; recovery. HULLEU and VILLETTE. J. d. sc. méd. de Lille, 1913, xxxvi, No. 14.

Cystic dilatation of the bile-ducts affected with congenital cholangiectasis. LETULLE. Presse méd., 1913, xxi, 97.

Anastomosis between the cystic duct and duodenum. F. SASSE. Arch. f. klin. Chir., 1913, c, 969. [159]

Choloele (rupture of the gall-bladder). ERNST LEVIN. Med. Klin., 1913, ix, 531.

Microscopic perforation of the gall-bladder. K. HUGEL. Beitr. z. klin. Chir., 1913, lxxxiii, 623.

Acute perforative cholecystitis complicated by general peritonitis. C. M. REMSEN. Surg., Gynec. & Obst., 1913, xvi, 386. [160]

Double syndrome of biliary retention and duodenal stenosis (cicatricial obliteration of the choledochus and chronic subhepatic peritonitis resulting from cholelithiasis. MOLLARD and FAVRE. J. d. praticiens, Par., 1913, xxvii, No. 17.

Cholecystectomy from rear to front. GOSSET and DESMAREST. Presse méd., Par., 1913, xxi, 205. [160]

The indications for surgical interference in gall-bladder diseases. G. A. UNGER. Med. Fortnightly, 1913, xliii, 149.

Surgical method of clearing up chronic typhoid carriers; report of two cases of removal of the gall-bladder and the entire cystic duct. T. J. LEARY. J. Am. M. Ass., 1913, lx, 1293.

A peripancreatic cyst between the leaves of the transverse mesocolon. E. A. DELFINO. Deutsche Ztschr. f. Chir., 1913, cxxi, 280. [161]

Pancreatitis. W. T. RICHARDS. New Orleans M. & S. J., 1913, lxv, 734.

A case of hemorrhagic pancreatitis. SLAWINSKI. Przegl. chir. i ginek., Warszawa, 1913, viii, 254.

Ideas concerning the causation of some cases of pancreatitis. E. ARCHIBALD. Canad. J. M. & S., 1913, xxxiii, 263.

Aberrant pancreas in the splenic capsule. F. D. WEIDMAN. Anatomical Rec., 1913, vii, 133. [161]

Transpancreatic choledocholithotomy; clinical and anatomical study. G. MORONE. Riforma med., 1913, xxix, 174. [162]

Experimental resection of the pancreas and pancreatico-enterostomy. FAYKISS. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Spontaneous rupture of the spleen. S. JOHANSSON. Hygiea, 1913, lxxv, 68.

Relations of the spleen to active immunity from tumors. H. APOLANT. Ztschr. f. Immunitätsforsch., 1913, xvii, 219.

Primary sarcoma of the spleen; some consideration on tumors of the spleen. TÉMOIN and BONNET. Arch. prov. de chir., Par., 1913, xxii, No. 3.

Primary splenomegaly of the Gaucher type; report of a successful splenectomy. W. A. DOWNES. Med. Rec., 1913, lxxxiii, 697.

Miscellaneous

Pathogenesis of abdominal pain. LECLERCQ and LEROY. Écho méd. du nord, Lille, 1913, xvii, No. 16.

Abdominal pain; its diagnostic significance. J. F. ERDMANN. Canad. J. M. & S., 1913, xxxiii, 269.

Partial inversion of the abdominal viscera. HART. Arch. f. Verdauungs-Krankh., 1913, xix, No. 2.

Gunshot wounds of the abdomen, in civil practice. F. R. HAUSSLING. J. M. Soc. N. J., 1913, ix, 547.

A plea for more care in the diagnosis of abdominal surgical conditions; some of the newer methods of diagnosis. C. H. HARRIS. Tex. St. J. Med., 1913, viii, 325.

Coeliotomy in infancy and early childhood. Q. W. HUNTER. Am. J. Surg., 1913, xxvii, 104. [162]

The value of surgical interference in the abdominal region in children. BALAS. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Surgical conditions of the abdomen in their relation to life expectation. M. B. MILLER. Med. Rec., 1913, lxxxiii, 605.

Preliminary and post-operative treatment of abdominal operations. W. L. COUSINS. J. Me. M. Ass., 1913, iii, 1263.

SURGERY OF THE EXTREMITIES

Diseases of Bones, Joints, Muscles, Tendons.**General Conditions Commonly found
in the Extremities**

Re-formation of bone after resection. G. A. PIRIE. *Edinb. M. J.*, 1913, x, 346. [162]

A few interesting cases of bone lesions. W. W. GRIFFIN. *Med. Rec.*, 1913, lxxxiii, 650.

The etiology of rickets and calcium metabolism. W. DIBBELT. *Deutsche med. Wchnschr.*, 1913, xxxix, 551. [163]

Radiography of osteomyelitis. BROCA and PHILBERT. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 43.

Experimental contributions on the pathogenesis of acute hæmatogenous osteomyelitis. DUMONT. *Deutsche Ztschr. f. Chir.*, 1913, cxii, Nos. 1-2.

The diagnostic significance of the leucocyte count in osteomyelitis and tuberculosis of the bones in childhood. E. W. FISKE. *Boston M. & S. J.*, 1913, clxviii, 606. [163]

Chronic hypertrophic osteitis without abscess formation or necrosis. LEJARS. *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 465. [163]

Three cases of tuberculous disease of the lower end of the femur illustrating some points in pathology and treatment. W. I. D. WHEELER. *Med. Press & Circ.*, 1913, cxlvi, 410. [164]

Treatment of tuberculous bone abscesses and sinuses with tuberculin. W. S. NIBLETT. *N. Y. M. J.*, 1913, xcvi, 878.

Surgical tuberculosis. L. SEXTON. *Med. Rec.*, 1913, lxxxiii, 618.

Surgical treatment of tuberculosis. H. ISELIN. *Samml. klin. Vortr. Chir., Leipz.*, 1913, clxxxvii, 709. [164]

Treatment of bone and joint tuberculosis. KÖNIG. *Deutscher chir. Kong.*, 1913. [164]

Treatment of bone and joint tuberculosis. GARRÈ. *Deutscher chir. Kong.*, 1913. [165]

X-ray treatment of bone and joint tuberculosis. F. SCHEDE. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 497. [165]

Cystic tumor of the head of the femur. PRAT. *Rev. de l. hosp., Montevideo*, 1913, vi, No. 1.

The causes of bone cysts. PEREZ. *Policlin.*, Roma, 1913, xx, No. 4.

Multiple myeloma, and its association with Bence-Jones' albumose in the urine. THEO. SHENNAN. *Edinb. M. J.*, 1913, x, 321.

Primary adamantinoma of the tibia. FISCHER. *Frankf. Ztschr. f. Path.*, 1913, xii, No. 3.

Two cases of Paget's disease of the bone with etiological considerations. ESMEIN. *Progrès méd.*, 1913, xli, No. 13.

The treatment of lime starvation. J. F. RUSSELL. *Med. Rec.*, 1913, lxxxiii, 517. [166]

Injuries of the joints by projectiles. LUDWIG SCHLIEP. *Deutsche med. Wchnschr.*, 1913, xxxix, 600.

Injuries to the semilunar cartilages of the knee-joint. R. MORISON. *Clin. J.*, 1913, xlii, 1.

A rarely observed form of traumatic lesion of the knee. SERRA. *Arch. di ortop., Milano*, 1913, xxx, No. 1.

Diseases of joints and bone marrow. L. W. ELY. *Am. J. Surg.*, 1913, xxvii, 81. [166]

Considerations regarding the pathology and treatment of some common joint diseases. E. A. RICH. *Northwest Med.*, 1913, v, 92. [167]

What can be done for the relief of our arthritic patients? J. A. STOUTENBURGH. *Am. Med.*, 1913, xix, 259.

One hundred cases of acute arthritis among the negro laborers on the Panama Canal. W. BAETZ. *J. Am. M. Ass.*, 1913, lx, 1065.

The etiology of articular and muscular rheumatism. E. C. ROSENOW. *J. Am. M. Ass.*, 1913, lx, 1223. [167]

Rheumatoid arthritis. J. BARR. *Brit. M. J.*, 1913, i, 753.

Rheumatoid arthritis in children. JAS. LINDSAY. *Edinb. M. J.*, 1913, x, 332. [168]

Stiff and painful shoulders with loss of power in the upper extremity from injuries or inflammations of the shoulder-joint. T. T. THOMAS. *Therap. Gaz.*, 1913, xxxvii, 229.

Pseudo-arthritis of the humerus associated with radial paralysis; intervention; recovery. COCHEZ. *Bull. méd. de l'Algérie, Alger*, 1913, xxiv, No. 5.

Tuberculous arthritis of the wrist. R. LOZANO. *Clin. moderna, Madrid*, 1913, xii, 155.

The employment of heliotherapy in tuberculous arthritis. JAUBERT. *Par. méd.*, 1913, No. 19.

Joint tuberculosis. L. W. ELY. *Interst. M. J.*, 1913, xx, 334. [168]

Tuberculosis of the bones and joints and its homoeopathic treatment. A. N. ROGATCHEVSKY. *North Am. J. Homeop.*, 1913, xxviii, 222.

The treatment of tuberculous joints. J. L. PORTER. *Surg., Gynec., & Obst.*, 1913, xvi, 334. [169]

Deformities which are secondary to tuberculosis of the knee. COMISSO. *Arch. di ortop., Milano*, 1913, xxx, No. 1.

A new and simple treatment for acute traumatic subdeltoid bursitis. J. M. FLINT. *J. Am. M. Ass.*, 1913, lx, 1224.

Traumatic lumbago. E. K. HERDMAN. *Phys. & Surg.*, 1913, xxxv, 172.

Rupture of the biceps brachialis. ETTORE MARSILI. *Gazz. med. lomb., Milano*, 1913, lxxii, 114.

Infections of the hand. L. W. HOON and G. J. ROSS. *Ann. Surg., Phila.*, 1913, lvii, 561. [169]

Hand lesions following injuries of the upper extremities. H. BUCHOLZ. *Boston M. & S. J.*, 1913, clxviii, 561.

Conservative treatment of hand injuries by means of wet antiseptic dressing. W. P. NICHOLSON. *Old Dominion J.*, 1913, xvi, 176.

Extension traumatism of the limbs; a clinical study and therapeutic considerations of what is to be done in such cases. LERAT and ERTAUD. *Arch. méd.-chir. de Province, Poitiers*, 1913, viii, No. 3.

Arborescent lipoma of the knee. LEFEVRE and DUBOURG. *Arch. gén. de chir., Par.*, 1913, vii, No. 3.

A lecture on some obscure affections of the foot. A. H. TUBBY. *Clin. J.*, 1913, xlii, 42.

Cold gangrene caused by vascular paralysis. WIETING. *Zentralbl. f. Chir.*, 1913, xl, No. 16.

The treatment of incipient gangrene. FRANK. *Zentralbl. f. Chir.*, 1913, xl, No. 13.

The conservative treatment of diabetic gangrene of the lower extremity. DEWITT STETTEN. *J. Am. M. Ass.*, 1913, lx, 1126.

Gangrene of the lower limb in a child twelve years of age; treatment by air heated to 770°; death. CURTILLET, LOMBARD and LAVERNE. *Bull. méd. de l'Algérie, Alger*, 1913, xxiv, No. 5.

Diagnosis and treatment of gangrene of the foot. MOSZKOWICZ. *Zentralbl. f. Chir.*, 1913, xl, No. 14.

Fractures and Dislocations

Fractures: Preliminary report of committee. ESTES, HUNTINGDON, WALKER, MARTIN and ROBERTS. *Tr. Am. Surg. Ass.*, 1913, May. [170]

Fracture about joints. B. O. ADAMS. *Colo. Med.*, 1913, x, 127.

Diagnosis and treatment of some fractures, especially into the joints. MEYER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 3.

The immediate treatment of fractures. W. W. GRANT. *Colo. Med.*, 1913, x, 124.

Treatment of compound fractures. W. W. SPARGO. *New Mex. M. J.*, 1913, x, 22.

Traction after the method of codivilla. ANZOLETTI. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

Treatment by massage and movement, particularly in relation to fractures. R. C. ELSMLIE. *Clin. J.*, 1913, xlii, 8.

Fractures, injuries and traumatic affections of the bones. STRAUSS. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, No. 3.

Separatim fracture of the greater tuberosity of the humerus. E. VAN ERPS. *Clinique, Brux.*, 1913, xxvii, 193.

The treatment of simple fractures of the humerus complicated by immediate paralysis. SCHWARTZ. *Paris méd.*, 1913, No. 21.

Diagnosis and treatment of fractures in the region of the elbow-joint. T. VOECKLER. *Med. Klin.*, 1913, ix, 441.

Isolated fractures of the cubitus associated with luxation of the head of the radius. KIRMISSON. *Presse méd., Par.*, 1913, xxi, No. 29.

Final results of the treatment of fractures of the radius. F. SCHULTZ. *Dissertation, Erlangen*, 1913.

Treatment of fracture of the patella. R. BROWN. *Calif. St. J. Med.*, 1913, xi, 167.

The diverse forms of fractures due to tearing of the anterior tuberosity of the tibia. LANCE. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 49.

Fractures of the superior extremity of the tibia. J. MOREAU. *Clinique., Brux.*, 1913, xxxvii, 241.

Fractures of the fibula. LUQUET and DEDET. *Gaz. d. hôp., Par.*, 1913, lxxxvi, Nos. 39-41.

Fractures of the calcaneum (recent fractures). SOUBEYRAN and RIVES. *Rev. de chir., Par.*, 1913, xxxiii, No. 4.

The third malleolar bone; posterior marginal fracture. DESTOT. *Lyon chir.*, 1913, ix, No. 4.

Primary traumatic dorsal complete radiocarpal dislocation. A. M. MILLER. *Surg., Gynec. & Obst.*, 1913, xvi, 400. [171]

Radial dislocation of the hand associated with isolated palmar luxation of the scaphoid bone. SPECK. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, Nos. 1-2.

Surgery of the Bones, Joints, etc.

The open treatment of fractures. E. H. BECKMAN. *J. Lancet*, 1913, xxxiii, 191.

The open treatment of fracture of the femur. A. MCGLANNAN. *Surg., Gynec. & Obst.*, 1913, xvi, 429. [172]

Operative fixation as a cause of delay in union of fractures. J. B. ROBERTS. *Ann. Surg., Phila.*, 1913, lvii, 545.

Osteoplastic surgery in pseudo-arthritis of the tibia. VULPIUS. *Zentralbl. f. chir. u. orthop. Chir.*, Berl., 1913, vii, No. 4.

A new application of free osteoplastic operation in fixation of paralytic foot. G. FRATTIN. *Zentralbl. f. Chir.*, 1913, xl, 229. [172]

Treatment of fractures of the patella. SAKOBIELSKI. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, No. 3.

The treatment of fracture of the patella; a new method of repairing the extensor muscles. F. SCHULTZE. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 567. [172]

Operation and open method of treatment in purulent fistulous tuberculosis of the joints. VON WRZESNIEWSKI. *Deutscher chir. Kong.*, 1913. [173]

Some practical points concerning the operative treatment of bow-leg and knock-knee. PRESCOTT LEBRETON. *Buffalo M. J.*, 1913, lxviii, 503.

Modeling osteotomy in flat-foot associated with severe deformity of the bones. PERTHES. *Zentralbl. f. Chir.*, 1913, xl, No. 15.

A case of the removal of the astragalus. H. TEMPLE MURSELL. *Transvaal M. J.*, 1913, viii, 230.

Transplantation and grafting of bone. R. CALDWELL. *J. Tenn. St. M. Ass.*, 1913, v, 477.

The end result of excision of the elbow for tuberculosis. T. W. TODD. *Ann. Surg., Phila.*, 1913, lvii, 430. [173]

Clinical and experimental observations on ivory implantations. F. KÖNIG. *Deutscher chir. Kong.*, 1913. [173]

Arthrodesis of the hip-joint. VULPIUS. *München. med. Wchnschr.*, 1913, lx, No. 15.

The operative treatment of flexed contractures and ankyloses of the knee-joint. WREDEN. *Zentralbl. f. chir. u. orthop. Chir.*, Berl., 1913, vii, 131.

Interposition of detached aponeurotic flaps for the surgical mobilization of ankyloses and stiffness of the joints. PUTTI. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

Transplantation of fat in joint surgery. RÖPKE. *Deutscher chir. Kong.*, 1913. [174]

Re-transplantation of joint-bones: arthro-autoplasty. LEXER. *Zentralbl. f. Chir.*, 1913, xl, 603. [174]

Isolation of groups of muscles for the treatment of spastic paralysis. ALLISON. *Ztschr. f. orthop. Chir., Stuttg.*, 1913, xxxi, 444.

Free transplantation of tendons. ENDERLEN. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 727.

The results obtained by implantation of silk tendons in the residual paralysis of poliomyelitis. ALLISON. *Am. J. Orthop. Surg.*, 1913, x, 519. [174]

Treatment of Volkmann's contracture. EMORY G. ALEXANDER. *Ann. Surg., Phila.*, 1913, lvii, 555. [175]

Technique of the movable stump in amputations. Z. SLAWINSKI. *Zentralbl. f. Chir.*, 1913, xl, 459. [175]

Amputation flaps. J. N. JACKSON. *Surg., Gynec. & Obst.*, 1913, xvi, 434. [175]

ORTHOPEDIC SURGERY

Diseases and Deformities of the Spine

Impacted fracture of the body of the first lumbar vertebra; laminectomy; rapid recovery following decompression of the cord. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 2. [176]

Etiology and treatment of scoliosis. VACCHELLI. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

A unique case of congenital scoliosis. J. FRASER and J. W. L. SPENCE. *Arch. Pediatrics*, 1913, xxx, 276.

Spondilic scoliosis. VECCHI. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

The use of corrective plaster jackets in the treatment of scoliosis. E. S. HATCH. *New Orleans M. & S. J.*, 1913, lxxv, 709. [176]

The new method of treating scoliosis by Abbott's method of plaster-of-Paris dressing. OSKAR VULPIUS. *Deutsche med. Wchnschr.*, 1913, xxxix, 695.

Abbott's method of treating lateral curvature of the spine. JOACHIMSTHAL. *Berl. klin. Wchnschr.*, 1913, l, 671.

Abbott's method of treatment of old scoliosis. CALOT and PRIVAT. *Paris méd.*, 1913, No. 21.

Pott's disease. S. L. MCCURDY. *Pittsburgh M. J.*, 1913, i, 35.

Vertebral tuberculosis of traumatic origin. DELITALA. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

Bone transplantation in tuberculous spondylitis. FRED H. ALBEE. *Ztschr. f. orthop. Chir.*, Stuttg., 1913, xxxi, 460.

Typhoid spondylitis. ARDIN-DELTEIL, RAYNAUD, COUDRAY, ANDUZE-ACHAER. *Bull. méd. de l'Algérie*, Alger, 1913, xxiv, No. 5.

A case of typhoid spondylitis. FAVRE and BOVIER. *Lyon méd.*, 1913, cxx, No. 14.

An experimental study of bone growth and the spinal bone transplant. FRED H. ALBEE. *J. Am. M. Ass.*, 1913, lx, 1044. [176]

Sarcoma of the spinal meninges. CREYX. *J. de méd. de Bordeaux*, 1913, xliii, No. 15.

The operative treatment of lues of the central nervous system. SCHÖNBORN. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, Jena, 1913, xvi, No. 4.

A very large multilobular fibroma in the cervical spinal cord. MERZBACHER and CASTEX. *Deutsche Ztschr. f. Nervenhe.*, Leipz., 1913, xlvi, 146.

Present and future of spinal cord surgery. M. ROTHMANN. *Berl. klin. Wchnschr.*, 1913, l, 528.

Malformations and Deformities

The correction of congenital equinovarus; report of thirty-six cases. CHAS. F. EIKENBARY. *Northwest Med.*, 1913, v, 97. [177]

Congenital synostosis of the forearm. H. MAASS. *Deutsche med. Wchnschr.*, 1913, xxxix, 704.

A case of congenital ankylosis of the elbow in an arm which was malformed and retarded in growth. C. BYCHOWSKY. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 480.

Statistics of congenital malformations recorded in Japan. B. HIROMOTO. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, 219.

The prognosis of the congenital luxation of the hip-joint. ALBERTUS PLANTEN. *Dissertation*, Utrecht, 1913.

Double congenital luxation of the hip-joint. KIRMISSON. *Clinique, Par.*, 1913, viii, No. 14.

Foetal disturbances of development of the pelvis and the spinal column as the cause of deformities, especially of scoliosis and congenital luxation of the hip-joint. EDMUND FALK. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 545.

Deformities of the thigh remaining after reduction of congenital luxation of the hip-joint. HORVATH. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Nervous hyperexcitability observed in certain cases of congenital luxation of the hip-joint; their influence on the course of treatment of the luxation. GOURDON. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 46.

Hereditary transmission of congenital dislocation of the hip-joint. HAYASHI and MATSUOKA. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 400.

A case of congenital malformation of the lower limbs treated by operation. PELTESOHN. *Berl. klin. Wchnschr.*, 1913, l, No. 16.

The treatment of congenital club-foot. OSKAR VULPIUS. *Deutsche med. Wchnschr.*, 1913, xxxix, 585.

The flat-foot in children and in adults. LANCE. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 37.

The valgus deformity of the foot. LOOSER. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, No. 3.

Coxa vara; some observations on this condition with especial reference to the question of spontaneous recovery from this deformity. JAS. W. SEVER. *Boston M. & S. J.*, 1913, clxviii, 495. [177]

Comment on Geiger's article entitled: "Study of hollow claw-foot." MÜLLER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 3.

Etiology and treatment of genu valgum. HEINRICH HEINLEIN. *Deutsche med. Wchnschr.*, 1913, xxxix, 702.

Arrests of development in the upper and lower extremities. E. LÖWENSTEIN. *Ztschr. f. orthop. Chir.*, 1913, xxxi, 424.

The orthopedic surgeon's relation to chronic disease. L. T. SWAIM. *Clifton M. Bull.*, 1913, i, 17.

Statistical account, for the first two-year period, of the activities of the orthopedic section. GUACCERO. *Arch. di ortop.*, Milano, 1913, xxx, No. 1.

Twelve years of orthopedics; therapeutic experiences and methods of treatment. WILHELM BECKER. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, 24.

SURGERY OF THE NERVOUS SYSTEM

Ischæmic peripheral neuritis. E. DUHOT, R. PIERRET and VERHAEGE. *Encéphale*, 1913, viii, 137.

A case of polyneuritis of the lower limbs after severe hæmorrhage and prolonged elevation of the limbs. E. DUHOT, R. PIERRET and E. VERHAEGE. *Arch. gén. de chir.*, 1913, vii, 138.

Four cases, in one family, of neuromyofibrosarcomatosis. ALFRED MATHIES. *Ztschr. f. klin. Med.*, 1913, lxxvii, 50.

Malignant sympathoblastic tumor of the cervical N. sympathicus, partially differentiated into a benign gan-

glioneuroma. K. MARTIUS. *Frankf. Ztschr. f. Pathol.*, 1913, xii, 442.

Stretching of the solar plexus on account of tabetic gastric crises. LERICHE. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, Nos. 1-2.

Paralysis of the radial nerve due to accident or lead poisoning? PAUL EWALD. *Ärzt. Sachverst.-Ztg.*, 1913, xix, 168.

Results obtained with nerve suture. STROBEL and KIRSCHNER. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 3.

DISEASES AND SURGERY OF THE SKIN, FASCIA AND APPENDAGES

Multiple lymphoid tumors of the skin; report of a case. JAS. M. WINFIELD. *J. Cutan. Dis.*, 1913, xxxi, 245.

Superficial gangrene associated with an enormous phlyctæna. MAUCLAIRE. *Arch. gén. de chir., Par.*, 1913, vii, No. 3.

Myomata of the cutis and the subcutis. PAUL SOBOTKA. *Arch. f. Dermatol. u. Syphilis*, 1913, cxvi, 79.

The action of X-rays on the development of callus; a comparative study of radiographic and microscopical pictures of callus. CLUZET and DUBREUIL. *J. de physiol. et de path. gén., Par.*, 1913, xv, No. 2.

Conservative treatment of crural ulcer. SOLOWJEW. *Pract. Vrach., St. Petersburg*, 1913, xii, 132.

Contribution to the study of free transplantation of fascia in the human organism. O. M. CHIARI. *Wien. klin. Wchnschr.*, 1913, xxvi, 287. [177]

Free transplantation of fascia. WARSCHAUER. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, Nos. 1-2.

Treatment of chronic ulcers of the leg, with special reference to symptomatology and diagnosis. E. ADAMS. *Internat. J. Surg.*, 1913, xxvi, 118.

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

Fundamental problems in the study of tumors. FISCHER. *Frankf. Ztschr. f. Pathol.*, 1913, xii, No. 3.

Are tumors caused by trauma? J. AKERMAN. *Hygiea*, 1913, lxxv, 193.

Cancer. D. CRAGIN. *J. Me. M. Ass.*, 1913, iii, 1282.

The menace of cancer. HOFFMAN. *Tr. Am. Gynec. Ass.*, 1913, May. [178]

Malignant tumors among the negro population of AFRICA. HUGUENIN. *Rev. suisse de méd.*, Bâle, 1913, xiii, No. 13.

The laboratory diagnosis of malignancy. H. R. ALBERGER. *Lancet-Clin.*, 1913, cix, 442.

The cancer problem. L. COLEGROVE. *N. Y. St. J. Med.*, 1913, xiii, 187.

The cancer problem. L. D. FRESOLIN. *Med. Summary*, 1913, xxxv, 45.

Report of four years' work on cancer. T. A. HOGAN. *Illinois M. J.*, 1913, xxiii, 417.

On behalf of the fight against cancer. LASTARIA. *Arch. ital. di ginec.*, Napoli, 1913, xvi, No. 3.

The present status of cancer. B. B. CATES. *J. Tenn. St. M. Ass.*, 1913, v, 480.

The blood catalase in malignant tumors. G. L. ROHDENBERG. *N. Y. M. J.*, 1913, cxvii, 824.

Cancer and its cure. J. C. BATESON. *Med. Summary*, 1913, xxxv, 40.

Processes of spontaneous healing in cancer. SCHUERER. *München. med. Wchnschr.*, 1913, lx, 952.

The effect of general contraction of the peripheral blood-vessels upon mouse cancers. C. WALKER and H. WHITTINGHAM. *Lancet, Lond.*, 1913, clxxiv, 1010. [178]

Professional diseases of photographers; lesions of the blood; cancer. THIRY. *Paris méd.*, 1913, No. 17.

Discussion of the non-operative treatment of malignant disease; summary and reply. T. J. HORDER. *Proc. Roy. Soc. Med.*, 1913, vi, 119.

False transitions between normal and cancerous epithelium. ROUS. *J. Exp. Med.*, 1913, xvii, 494. [179]

Endothelioma. BRONISLAW SZERSZUNSKI. *Przegl. chir. i. ginek.*, 1913, viii, 209.

A transplantable new growth of the fowl producing cartilage and bone. TYTLER. *J. Exp. Med.*, 1913, xvii, 466. [179]

Observations of a chicken sarcoma and the filterable causal agent thereof. ROUS, PEYTON and MURPHY. *Berl. klin. Wchnschr.*, 1913, l, 637.

Phlegmasia of neoplastic origin. WIDAL. *J. d. praticiens, Par.*, 1913, xxvii, No. 17.

Inflammation. P. G. WOOLLEY. *Lancet-Clin.*, 1913, cix, 360.

A case of sporotrichosis. M. BREMER. *Med. Rundschau*, 1913, lxxix, 238.

Note on the first case of sporotrichosis observed in Alger. GOINARD and LOMBARD. *Bull. méd. de l'Algérie, Alger*, 1913, xxiv, No. 6.

Rabies. O. MCDANIEL. *St. Paul M. J.*, 1913, xv, 168.

The diagnosis and treatment of rabies. R. B. H. GRADWOHL. *Med. Fortnightly*, 1913, xliii, 129.

Rabies; a pathognomonic sign generally overlooked. M. B. WESSON. *J. Am. M. Ass.*, 1913, lx, 1069.

A case of tetanus. CHAUFFARD. *J. d. praticiens, Par.*, 1913, xxvii, No. 14.

Anatomical-clinical forms of the post-operative cystic pneumatosis following removal, without drainage, of hydatid cysts. DÉVÉ. Arch. méd.-chir. de Province, Poitiers, 1913, viii, No. 3.

Shock: physiology. A. W. COLCORD. Internat. J. Surg., 1913, xxvi, 123.

Shock and its management. I. HARDY. Va. M. J., 1913, vii, 341.

New advances in plastic surgery. MUTSCHENBACHER. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

A new method of experiments in transplantation. JAROSLAV ELGART. Čas. lékař. česk., 1913, lii, 367.

Grafts and transplantations of tissues and organs. DONATI. Clin. chir., Milano, 1913, xxi, No. 3.

The transplantation of rib cartilage into pedunculated skin flaps; an experimental study. J. S. DAVIS. Bull. Johns Hopkins Hosp., 1913, xxiv, 116. [179]

Pathogenesis of late deaths after burns. LUIGI CAFORIO. Nuova riv. clin.-terap., Napoli, xvi, 122.

Sera, Vaccines and Ferments

The preparation and employment, in a series of cases, of a potent polyvalent antistaphylococcic serum. B. A. THOMAS. J. Am. M. Ass., 1913, lx, 1070.

Tetanus successfully treated with antitetanic serum. L. J. FRIEDMAN. N. Y. M. J., 1913, xcvi, 715.

Further observations on the treatment of tetanus with magnesium sulphate. T. KOCHER. Cor.-Bl. schweiz. Ärzte, 1913, xliii, 97. [180]

Intensive serotherapy: a cured case of tetanus; post-diphtheritic paralysis and serotherapy. CRANGEE. Paris méd., 1913, No. 17.

Serodiagnosis of malignant tumors. FERDINAND SCHENK. Wien. klin. Wchnschr., 1913, xxvi, 529.

Complement-fixation tests for streptococcus, gonococcus, and other bacteria in infective deforming arthritis and arthritis deformans. T. W. HASTINGS. J. Am. M. Ass., 1913, lx, 1208.

Pirquet's cutaneous reaction; diagnostic value of the general reaction. LEOLUCA CHIARAVALLOTTI. Riforma med., 1913, xxix, 57.

The value of tuberculin in diagnosis. L. J. MOORMAN. Med. Herald, 1913, xxxii, 144.

Tuberculin diagnosis and tuberculin therapy. OTFRIED MÜLLER. Med. Cor.-Bl. d. württemb. ärztl. Ver., Stuttg., 1913, lxxxiii, 213.

The so-called "focal" tuberculin reaction in tuberculosis of bones and joints. DELITALA. Arch. di ortop., Milano, 1913, xxx, No. 1.

Tuberculin treatment. W. RENDTORFF. Med. Council, 1913, xviii, 135.

Vaccination for various infections with living micro-organisms. W. BROUGHTON-ALCOCK. Lancet, Lond., 1913, clxxxiv, 1155.

Experiences with Abderhalden's ferment reaction in carcinoma. FRANK and HEIMANN. Berl. klin. Wchnschr., 1913, l, No. 14.

The employment of protective enzymes of the blood as a means of extracorporeal diagnosis. C. P. McCORD. Surg., Gynec. & Obst., 1913, xvi, 418. [180]

Organic-extract therapy. W. SCHURMANN and T. FELLNER. Fortschr. d. Med., 1913, xiii, 477.

Immunity. J. R. HALL. J. Mo. St. M. Ass., 1913, ix, 333.

The relative value of living or dead tubercle bacilli and of their endotoxins in solution in active immunization against tuberculosis. K. VON RUCK. Med. Rec., 1913, lxxxiii, 507. [181]

A modification of Spengler's rapid precipitation method

for the estimation of approximate immunity against tuberculosis. WALTER H. FEARIS. Practitioner, Lond., 1913, xc, 713.

Anaphylaxis; report of a case. M. J. MAGRUDER. New Orleans M. & S. J., 1913, lxxv, 709.

Blood

Further studies on the chemistry of blood serum. A. A. EPSTEIN. J. Exp. Med., 1913, xvii, 444. [182]

The relation of the leucocytic bacteriolysin to body fluids. W. H. MANWARING. J. Exp. Med., 1913, xvii, 409.

Condition of the blood resembling leucæmia, in association with a malignant tumor. VON DIEBALLA and BELA ENTZ. Folia hæmatol. Arch., 1913, xv, 59.

The antiphlogistic effect of the passive hyperæmia treatment. SCHILLER. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Occult blood, its value in diagnosis and treatment. G. F. KOEHLER. Med. Sentinel, 1913, xxi, 860.

Chemical tests for occult blood. H. E. ROBERTSON. J.-Lancet, 1913, xxxiii, 210.

Circulation of the blood in the lungs, with closed and with open thorax and the influence thereon of high or low pressure. FRIEDRICH VON ROHDEN. Deutsches Arch. f. klin. Med., 1913, cix, 383.

Researches on the physico-chemical changes of the blood during the course of anaphylaxis. EDGARD ZUNZ. Ztschr. f. Immunitätsforsch., 1913, xvii, 47.

The detection of foreign substances in the blood by dialysis and optical methods and the use of such methods and the principles underlying them in pathology. E. ABDERHALDEN. Beitr. z. klin. d. Infektionskrankh. u. z. Immunitätsforsch., 1913, i, 243. [182]

Subcutaneous medication in anæmias. M. K. ROBBIE. Tex. St. J. Med., 1913, viii, 335.

Hæmorrhage of the new-born. J. W. AMESSE. Colo. Med., 1913, x, 110.

Hæmorrhagic disease of the new-born infant treated by horse-serum. W. B. JENNINGS. J. Am. M. Ass., 1913, lx, 1154.

Hæmorrhagic conditions in children-pathology-etiology treatment. A. L. SORESI. Arch. Pediatrics, 1913, xxx, 252.

Red and white blood corpuscles found well conserved in the region of a traumatic hæmorrhage in a cadaver interred for four years. LANDE and MURATET. Gaz. hebdom. d. sc. méd. de Bordeaux, 1913, xxxiv, No. 15.

Hæmophilia in women. CZYBORRA. Monatsschr. f. Geburtsh. u. Gynäk., Berl., 1913, xxxvii, No. 4.

A clinical study of the coagulation time of blood. LEE and WHITE. Am. J. M. Sc., 1913, cxlv, 495.

What is the practical surgical value of determining the coagulability of the blood? SCHLOSSMANN. Deutscher chir. Kong., 1913. [182]

Remedial agents which specifically check coagulation and decrease the blood pressure in the female genitalia. L. POPIELSKI. Biochem. Ztschr., 1913, xlix, 168.

The new method of hæmostasis and treatment of wounds by the coagulin of Kocher-Fonio. FONIO. Cor.-Bl. f. schweiz. Ärzte, 1913, xliii, Nos. 13-14.

Gelatinæ as an internal styptic. E. RUEDIGER. Med. Klin., 1913, ix, 293.

Coagulation of the blood and its value in obstetrics and gynecology. DRUGG. Schmidt's Jahrb., Leipz., Mar., 1913. [183]

Thromboses and embolisms after gynecological operations. THEODOR VON WENZEL. Beitr. z. klin. Chir., 1913, lxxxiv, 37.

Injection of sugar as a prophylactic against thrombosis. KUHN. Deutsche Ztschr. f. Chir., 1913, cxxii, Nos. 1-2

Simplified transfusion. S. POPE. *J. Am. M. Ass.*, 1913, lx, 1284.

Infusion of physiological salt solution. A. THIES. *Zentralbl. f. Chir.*, 1913, xl, 554.

So-called congenital dropsy. PFREIMBT. *München. med. Wchnschr.*, 1913, lx, 951.

Blood and Lymph Vessels

A case of chronic plumbism in which multiple aneurisms occurred. R. G. CHASE. *Brit. M. J.*, 1913, i, 876.

The value of skiagraphy in the diagnosis of aneurism of the abdominal aorta; presentation of case and descriptive X-ray plates. C. A. PFENDER. *Wash. M. Ann.*, 1913, xii, 91. [183]

A new method of suturing blood vessels. SILVIO PORTA. *Deutsche Ztschr. f. Chir.*, 1913, cxx, 580.

A case of transposition of the large vessels. ERNST LIEBICH. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 570.

Primary tumors of the vascular envelopes. GUIDO FERRARINI. *Clin. chir.*, Milano, 1913, xxi, 589.

Obliteration of the inferior vena cava. HEBRARD. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 36.

Varicose enlargement of the vena saphena at the point of its insertion into the vena cruralis, simulating a crural hernia. G. MARCHETTI. *Gazz. internaz. di med. chir.*, Napoli, 1913, i, 81.

Varicose phlebitis. POTHERAT. *Clinique*, Par., 1913, viii, No. 17.

Anomalous internal carotid artery. A. P. ROOPE. *J. Indiana St. M. Ass.*, 1913, vi, 162.

The treatment of arterial hæmatomata. BAZY. *J. d. praticiens*, Par., 1913, xxvii, No. 15.

Ectasis of the veins of the lower extremity. KUZMIK. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Operation for embolus of the femoral artery. E. KEY. *Hygiea*, Stockholm, 1913, lxxv, 75. [183]

Wieting's operation and the impeded circulation. W. A. OPPEL. *Ärzte-Zeit.*, 1913, xx, 303. [184]

A case of inguinal lymphogranulomatosis. FAIVRE. *J. sc. et méd. de Poitiers*, 1913, v, No. 4.

Reply to the criticism by Ritter of my article on the development and disappearance of the lymphatic glands. S. B. DE GROOT. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 162.

Poisons

Infection by micrococcus tetrangenes in man. E. LEWENSTERN. *Przegl. chir. i ginek.*, 1913, viii, 238.

The treatment of infections. E. H. TROY. *Internat. J. Surg.*, 1913, xxvi, 129.

A case of acute septicopyæmia. T. G. ORR. *Med. Rec.*, 1913, lxxxiii, 711.

Cultural properties of certain species of coli bacillus. DESIDOR NATONEK. *Zentralbl. f. Bakteriöl.*, 1913, lx, 166.

Study of the bacterial flora in the surrounding atmosphere and the field of operation. VITTORIO PUCCINELLI. *Riv. osp.*, 1913, iii, 297.

The occurrence of tubercle bacilli in the circulating blood. H. DRESEN. *Med. Klin.*, 1913, ix, 580.

Tubercular bacilli in the circulating blood. ERNST FRAENKEL. *Deutsche med. Wchnschr.*, 1913, xxxix, 737.

A new agar for the rapid development of the tubercle bacillus. GUIDO VALLETTI. *Zentralbl. f. Bakteriöl.*, 1913, lxviii, 239.

Surgical Therapeutics

The treatment of cancer by colloid copper. G. HERSCHELL and R. J. COWEN. *Med. Press & Circ.*, 1913, cxlvi, 387.

The influence of colloidal silver on the opsonic index. WERNER and VON ZUBRZYCKI. *München. med. Wchnschr.*, 1913, lx, 583. [184]

The effect of heavy metals on malignant animal tumors. CARL LEWIN. *Berl. klin. Wchnschr.*, 1913, l, 541.

The effect of mercury preparations on the growth of mouse carcinomata. STANISLAW SKUDRO. *Wien. klin. Wchnschr.*, 1913, xxvi, 577.

Comparison of the action of adrenalin and the active principle of extracts of the hypophysis. HOUSSAY. *Argentina med.*, Buenos Ayres, 1913, xi, No. 11.

Scopolamin. SIEBER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 14.

On the value of peristaltin in the after-treatment of laparotomy patients. VON BRUNN. *Zentralbl. f. Chir.*, 1913, xl, 431.

Experiences with aponal in surgical cases. HERZBERG. *Fortschr. d. Med.*, 1913, xiii, 427.

The employment of picric acid in therapeutics. BRUNN. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 49.

Treatment of wounds by sugar. MAGNUS. *Zentralbl. f. Chir.*, 1913, xl, 556.

Dressing of burns. PLICQUE. *Bull. méd.*, Par., 1913, xxvii, No. 31.

The employment of formol in minor surgery. ENGEL. *Progrès méd.*, Par., 1913, xli, No. 17.

Surgical Anatomy

The ligaments of the patella. J. P. WARBASSE. *Long Island M. J.*, 1913, vii, 135.

Innervation of an axillary arch muscle. W. F. R. PHILLIPS. *Anatomical Rec.*, 1913, vii, 131.

Electrology

Burns produced by X-rays. J. M. DE PUELLES and RUIZ. *Ann. d'électrobiol. et de radiol.*, 1913, xvi, 111.

A new unit of X-ray power. S. TOUSEY. *Arch. Rönt. Ray.*, 1913, xvii, 427.

Experimental investigations in penetrating X-ray therapy. ROST and KRUGER. *Strahlentherap.*, 1913, ii, 314.

Comparison of the influence of thorium-X and Röntgen rays. KRAUSE. *Berl. klin. Wchnschr.*, 1913, l, No. 13.

Four years of experiments with Röntgen ray apparatus with an interrupter (rectifier) and certain important modifications of the apparatus. GRÖDEL. *München. med. Wchnschr.*, 1913, lx, 471. [184]

A case of lymphosarcoma treated by radium. D. F. D. TURNER. *Arch. Rönt. Ray.*, 1913, xvii, 418.

Treatment of malignant tumors with radio-active substances. CAAN. *München. med. Wchnschr.*, 1913, lx, 9. [185]

Surgical reflections on heliotherapy in tuberculous affections of children. LERICHE. *Deutsche Ztschr. f. Chir.*, 1913, cxvii, Nos. 1-2.

Skiagraphs on silver bromide paper; a method which considerably simplifies and cheapens radiography. FRANZ KRONECKER. *Allg. med. Zentral-Ztg.*, Berl., 1913, lxxxii, 137.

Radium as an aid in the treatment of malignant neoplasms. W. FREUNDENTHAL. *Internat. J. Surg.*, 1913, xxvi, 80. [185]

The influence on deep-seated carcinoma of X- and radium rays. ASCHOFF, KRÖNING and GAUSS. *München. med. Wchnschr.*, 1913, lx, 337. [186]

Notes from the X-ray department of St. Bartholomew's Hospital. STEUART. *Arch. Rönt. Ray.*, 1913, xvii, 412. [186]

Some experiments with ionic medication. N. S. FINZI. Arch. Rönt. Ray, 1913, xvii, 423.

Military and Naval Surgery

The action of pointed bullets. LOTSCH. Deutsche med. Wchnschr., 1913, xxxix, No. 13.

Injuries produced by modern fire arms in the various tissues. P. IMBRIACO. Policlin., Roma, 1913, xx, 549.

Treatment and dressing of gunshot wounds of the chest and the abdomen on the battle-field. SORGE. Militärarzt, Wien, 1913, xlvii, 103.

Surgical Diagnosis

Examination of the patients in surgery. HARTMANN. Presse méd., Par., 1913, xxi, No. 35.

The clinical value of colloid azote, according to the procedure of Salkowski and Kojo, for the diagnosis of cancer of the viscera. SEMIONOW. Presse méd., Par., 1913, xxi, No. 27.

Practical precautions for the avoidance of erroneous interpretations based on positive radiographies as the sole means of examination. NOGIER. Arch. d'électric. méd., Bordeaux, 1913, xxi, No. 354.

The necessity and means for early diagnosis in malignant diseases. W. E. SENOUR. Ky. M. J., 1913, xi, 291.

GYNECOLOGY

Uterus

On malignant tumors developing in the uterine stump after supra-vaginal amputation. HAUSEN. Zentralbl. f. Gynäk., 1913, xxxvii, No. 17.

Indications furnished by urinary exploration in operative indications of cancer of the uterus. VIOLET and MURARD. Rev. de gynec. et de chir. abdom., Par., 1913, xx, No. 2.

Late recurrence of cancer of the cervix of the uterus. CHARRIER and PAUCELIER. J. de méd. de Bordeaux, 1913, xliii, No. 13.

The treatment of inoperable carcinoma of the uterus ASCHHEIM. Med. Klin., 1913, ix, 797.

Marked influence of mesothorium raying on a cervical cancer. S. MEIDNER. Therap. d. Gegenwart, 1913, liv, 149.

Chorio-epithelioma; recurrence three years after; invasion of the spinal canal; villi in the secondary growths. EUGENE CARY. Surg., Gynec. & Obst., 1913, xvi, 362. [187]

Adenomyosis of uterus and rectum. RASPINI. Gynecologia, Milano, 1913, ix, No. 19.

Fibroma and carcinoma of the uterus. TOURNEUX and SAINT-MARTIN. Toulouse méd., 1913, xv, No. 6.

Electrical coagulation in the surgical treatment of cancer, especially of uterine cancer. ABEL. Berl. klin. Wchnschr., 1913, l, 394. [187]

Our opinion of the X-ray treatment of uterine myomata. LAQUERRIERE and DELHERM. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, 10.

Deep radiotherapy in gynecology; the treatment of myomata. ALBERS SCHÖNBERG. Arch. d'électric. méd., Bordeaux, 1913, xxi, No. 356.

Red degeneration of uterine fibromyomata. SMITH and SHAW. Proc. Roy. Soc. Med., 1913, vi, 131. [189]

X-ray treatment of fibromyomata of the uterus. CHILADITIS and STAVRIDES. Ann. de gynec. et d'obst., Par., 1913, x, No. 2.

The treatment of fibroid tumors, with report of 700 cases. E. McDONALD. Am. Med., 1913, xix, 161. [188]

Radiotherapy of uterine fibromata. SIREDEY. Rev. de gynec. et de chir. abdom., Par., 1913, xx, No. 2.

Etiology and treatment of uterine hæmorrhages. HIRSCH. Monatschr. f. Geburtsh. u. Gynäk., Berl., 1913, xxxvii, No. 4.

Mammin in uterine hæmorrhages. VON DER HOEVEN. Nederl. Tijdschr. v. Geneesk., 1913, i, 606. [189]

Pathological uterine hæmorrhages. W. R. BROOKSHER. J. Ark. M. Soc., 1913, ix, 255.

X-ray therapy in uterine hæmorrhage. A. FOGES. Wien. med. Wchnschr., 1913, lxiii, 995.

Clinical observations about the action of hemostin in uterine hæmorrhages. O. S. PARSAMOFF. Vrach. Gaz., 1913, xx, 396. [189]

The therapy of marked menorrhagia. A. RIECK. Deutsche med. Wchnschr., 1913, xxxix, 653. [189]

Menorrhagia and metrorrhagia of puberty; etiological and therapeutic considerations. RAILLIET. Arch. méd.-chir. de Province, Poitiers, 1913, viii, No. 3.

X-rays in the treatment of metrorrhagies. MAURICE WATRIN. Scalpel et Liège méd., 1913, lxxv, 463.

Dysmenorrhœa. J. H. CARSTENS. Cleveland M. J., 1913, xii, 233. [189]

Amenorrhœa and vicarious menstruation. D. J. DONNELLY. Med. World, 1913, xxxi, 144.

Treatment of amenorrhœa. FRIES. Deutsche med. Wchnschr., 1913, xxxix, 675.

Menstruation and uterus. C. G. VAN HOYTEMA. Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kindergeneesk., 1913, ii, 27.

Interstitial tuberculosis of the vaginal portion of the cervix. PETIT-DUTAILLIS. Gynécologie, Par., 1913, xvii, No. 2.

Foreign bodies in the uterus. G. M. KASTANAJEFF. Vrach. Gaz., 1913, xx, 342.

Vesicular mole in the uterus. SAUVAGE. Ann. de gynec. et d'obst., Par., 1913, x, No. 2.

Atresia of the cervical canal caused by caustics. MESSA. Ann. di ostet. e ginecol., 1913, xxxv, 242.

Prolapse and accident. E. MARTIN. Ärztl. Sachverst.-Ztg., 1913, xix, 117.

Polypus complicating inversion of the uterus and illustrating the difficulty of diagnosis. TWEEDY. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 190. [189]

Incontrollable vomiting and retroversion of the uterus. HERRGOTT. Rev. méd. de l'est, Nancy, 1913, xlv, No. 6.

Arteriosclerosis of the uterine vessels. J. F. FROSCH. Hahnemann Monh., 1913, xlviii, 284.

Contra-indications to curetting. R. T. FRANK. N. Y. M. J., 1913, xcvi, 808. [190]

Origin and prevention of perforations of the uterus and vagina in curettement of miscarriages. E. G. ORTHMANN. Frauenarzt, Berl., 1913, xxviii, 146.

The undeveloped antelexed uterus and the sterile woman. DEWITT G. WILCOX. *J. Am. Inst. Homeopathy*, 1913, v, 833. [190]

The relaxation of the cervix in the surgical treatment of antelexion of the uterus. S. DELLE CHIAIE. *Arch. ital. di ginec.*, 1913, xvi, 39. [190]

Hysterectomy for the cure of prolapsus of uterus. W. A. B. SELLMAN. *Am. J. Obst.*, N. Y., 1913, lxvii, 688. [190]

A discussion on ventrofixation; its indications, with an analysis of 77 cases. GRIFFITH. *Proc. Roy. Soc. Med.*, 1913, vi, 167. [190]

The after-results of operations for uterine displacements. GILES. *Proc. Roy. Soc. Med.*, 1913, vi, 192. [191]

The technique of ventral fixation of the uterus and allied operations. BRIGGS. *Proc. Roy. Soc. Med.*, 1913, vi, 176. [191]

Shall we remove the uterus when both tubes and ovaries are removed? W. H. GILBERT. *Lancet-Clin.*, 1913, cix, 398. [191]

Post-operative results of amputation of the cervix. V. N. LEONARD. *Surg., Gynec. & Obst.*, 1913, xvi, 390. [191]

A year's work in hysterectomy. J. B. DEEVER. *Am. J. M. Sc.*, 1913, cxlv, 469. [192]

The procedure of anterior amputation in abdominal hysterectomy. RICARD. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 37. [192]

A cradle suture for holding the uterus in ventro-suspension. H. I. OSTROM. *North Am. J. Homeop.*, 1913, xxviii, 199. [193]

Operative treatment of acute inversio uteri puerperalis. G. C. NYHOFF and T. M. MESDAG. *Ned. Maandschr. f. Verlosk. en Vrouwenz. en Kindergeneesk.*, 1913, iii, 145. [193]

Clinical demonstration of an operation for prolapsus uteri complicated by hypertrophy of the cervix. W. E. FOTHERGILL. *Brit. M. J.*, 1913, i, 762. [193]

Adnexal and Periuterine Conditions

Influence of the ovary as an organ of internal secretion. W. P. GRAVES. *Am. J. Obst.*, N. Y., 1913, lxvii, 649. [193]

Relation of a pseudomyoma of ovary and peritoneum to the appendix. BONDY. *Monatschr. f. Geb. u. Gynäk.*, 1913, xxxvii, 509. [193]

Two cases of metastatic neoplasm of both ovaries. FAIRIS and HEULLY. *Province méd.*, Par., 1913, xxvi, No. 16. [193]

Sarcomatous degeneration of a fibromyoma of the ovary. BORTKEWITSCH. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 419. [193]

Four cases of torsion of the pedicle of cysts of the ovary. DESSAUVAGES. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 13. [193]

Voluminous cyst of the parovarium of the retroperitoneal type. GUÉRIN-WALMALE and MOIROUD. *Marseille méd.*, 1913, l, No. 7. [193]

Tuberculosis of the adnexa. MACQUART. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 14. [193]

The significance of intestinal lesions in operative prognosis of tuberculosis of the adnexa (in particular, lesions of the small intestine). DESGOUTTES and OLIVER. *Lyon méd.*, 1913, cxx, 541. [193]

Inflammatory affections of the adnexa, inclusive of para- and perimetritis. FALGOWSKI. *Gynäk. Rundschau*, Berl., 1913, vii, Nos. 7 and 8. [193]

Infection of Fallopian tubes. J. C. CALHOUN. *Hahnemann Month.*, 1913, xlviii, 274. [193]

Placental carcinoma or malignant chorio-epithelioma of the tube. BAZY. *Ann. de gynec. et d'obst.*, Par., 1913, x, No. 2. [193]

Cold abscesses of the tube and papillary tuberculosis of

the tubal mucous membrane. MENTANELLI. *Ginecologia*, Napoli, 1913, ix, No. 22. [193]

Tubal reimplantation; a new conservative operation for sterilization of women. G. DE TARNOWSKY. *J. Am. M. Ass.*, 1913, lx, 1221. [193]

Metastatic sarcoma of the broad ligament associated with fibromyoma of the uterus. LAUWERS. *Bull. Acad. roy. de méd. de Belgique*, 1913, xxvii, 31. [193]

Some old pelvic inflammatory diseases; their non-surgical treatment; with report of cases. MCMORROW. *J. Am. M. Ass.*, 1913, lx, 966. [194]

A new operation for the sterilization of women which leaves the possibility of subsequent restoration of fertility. BLUMBERG. *Berl. Klin. Wchnschr.*, 1913, l, No. 16. [194]

A new method of shortening the round ligaments. S. FIGUEROA. *J. Am. M. Ass.*, 1913, lx, 1042. [194]

Contribution to the etiology of purulent retro-uterine exudates. QUEISNER. *Monatschr. f. Geb. u. Gynäk.*, 1913, xxxvii, 530. [194]

Pelvic cellulitis. F. TREON. *J.-Lancet*, 1913, xxxiii, 198. [194]

External Genitalia

Myoma of the vagina. DICKE. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 540. [194]

Imperforation of the vagina associated with pyosalpinx. FERRY. *Bourgogne méd.*, Dijon, 1913, xxi, No. 3. [194]

Vesico-vaginal fistulae. MAUCLAIRE. *Progrès méd.*, Par., 1913, xli, No. 13. [194]

The operative difficulties of vesico-vaginal fistulae. LEGUEU. *Clinique*, Par., 1913, viii, No. 15. [194]

Complete absence of the vagina; hæmatometra and hæmatosalpinx. BASSANI. *Ginecologia*, Milano, 1913, ix, No. 2. [194]

Creation of a new vagina, with report of a case of transplantation of the small intestine into the vagina. BROUHA. *Bull. Acad. roy. de méd. de Belg.*, 1913, xxvii, 29. [194]

The employment of the small intestine for the creation of a missing vagina. QUÉNU. *Bull. et mém. Soc. de chir. de Par.*, 1913, 493. [194]

Artificial vagina; a review of the various operative procedures for correcting atresia vaginae. G. B. MARSHALL. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 193. [194]

Vaginal surgery. S. W. BANDLER. *N. Y. M. J.*, 1913, xcvi, 797. [194]

Examination of the pelvic organs in doubtful cases through a vaginal incision. HUNTER ROBB. *Cleveland M. J.*, 1913, xii, 269. [194]

Gonorrhoeal vaginitis treated by vaccine. G. FITZGIBBON. *Med. Press & Circ.*, 1913, cxlvi, 385. [194]

The abuse and unconsidered employment of excessively hot vaginal irrigation in gynecology. LANGENHAGEN. *Gynécologie*, Par., 1913, xvii, No. 3. [194]

Treatment of leucorrhœa. GEORG KATZ. *Berl. klin. Wchnschr.*, 1913, l, 780. [194]

An operation for the cure of vaginal hernia. H. A. LOTHROP. *Boston M. & S. J.*, 1913, clxviii, 578. [195]

A new case of posterior labial hernia. PEUS. *Gynäk. Rundschau*, 1913, vii, No. 8. [195]

Contribution to the study of primary carcinoma of the vulva. SAVARE. *Ann. di ostet. e ginecol.*, 1913, xxxv, 238. [195]

Melanic sarcoma of the clitoris. VOGR. *Arch. f. Gynäk.*, 1913, xcix, No. 2. [195]

Observations on the preservation and repair of the female perineum. S. J. GOODMAN. *Am. J. Obst.*, N. Y., 1913, lxvii, 754. [195]

Large urethral caruncle in a girl of 9 years; a preliminary note, with a summary of the subject. C. G. BUFORD. *J. Am. M. Ass.*, 1913, lx, 1281. [195]

Miscellaneous

Foreign bodies in the female bladder. SENGE. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, No. 2.

Invasion of the bladder by a pessary after a Schauta-Wertheim operation for prolapse. W. STOECKEL. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, 38.

Bladder diseases in inflammatory affections of the adnexa. HAIM. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, No. 2.

Management of chronic cystitis in the female. T. J. STOUT. J. Ark. M. Soc., 1913, ix, 264.

Tuberculosis of the urinary system in women. E. H. RICHARDSON. Bull. Johns Hopkins Hosp., 1913, xxiv, 103.

Extra-vesical anastomosis of the ureters in women. HARTMANN. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, No. 2.

Some problems in gynecological diagnosis. N. S. BETTS. Hahnemann Month., 1913, xlviii, 290.

The etiology of gynatresias. F. KERMAUNER. Beitr. z. Geburtsh. u. Gynäk., 1913, xviii, 187. [195]

Bacteriological examinations in gynecological diseases. E. SCHOLL and W. KOLDE. Zentralbl. f. Gynäk., 1913, xxxvii, 561.

Genital functions of the ductless glands in the female. W. BLAIR BELL. Lancet, Lond., 1913, clxxiv, 937. 809, [196]

The prognostic value of the leucocyte count in pelvic suppurative conditions. JOS. T. SMITH. Surg., Gynec. & Obst., 1913, lxi, 403. [197]

The appendix and the female genitalia. BOGDANOVITSCH. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Reflex pains on pressure of coeliac plexus in inflammations of female genitals. ALPERIN. Zentralbl. f. Gynäk., 1913, xxxvii, 340. [197]

The bacteriological control of asepsis in gynecological laparotomies. SIGWART. Arch. f. Gynäk., Berl., 1913, xcix, No. 2.

Enlargement of the liver during menstruation. DIBAIL-OFF. Vrach. Gaz., St. Petersburg, 1913, xx, 439. [197]

Multiple primary carcinomata of the female genitalia. HAUSER. Arch. f. Gynäk., Berl., 1913, xcix, No. 2.

Thrombosis and embolism following gynecological operations. WENZEL. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Thigenol in gynecological treatment. A. HIRSCHBERG. Berl. klin. Wchnschr., 1913, l, 597. [197]

Synthetic hydrastin-Bayer, a substitute for fluid extract hydrastis canadensis. H. WALTHER. München. med. Wchnschr., 1913, lx, 694.

Technique and pathology of gynecological röntgenotherapy. SCHMIDT. Gynäk. Rundschau, Berl., 1913, vii, No. 8.

Experiences, results and technique of gynecologic X-ray treatment. F. G. HAENISCH. Fortsch. a. d. Geb. d. Röntgenstr., 1913, xx, 18.

The therapeutic use of X-rays in gynecology. P. HAENDLY. Strahlentherap., 1913, ii, 227.

X-ray treatment in gynecology. H. F. BAUER. Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kindergeneesk., 1913, ii, 77.

X-ray treatment in gynecology. J. MÜLLER. Berl. klin. Wchnschr., 1913, l, 566.

X-ray treatment in gynecology. F. HEIMANN. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 325. [197]

Importance of X-rays in gynecology and obstetrics. KRÖMER. Deutsche med. Wchnschr., 1913, xxxix, 676.

Röntgenotherapy in gynecology. LOREY. Gynäk. Rundschau, Berl., 1913, vii, No. 7.

The technique of Röntgen-ray gynaetrics. FRANKL. Gynäk. Rundschau, Berl., 1913, vii, No. 7.

Heliotherapy in gynecology. AIMES. Gynécologie, Par., 1913, xvii, No. 3.

The influence of the social factor upon the origin of tumors. THEILHABER. Krankh. u. soz. Lage, 1913, iii, 608. [198]

OBSTETRICS

Pregnancy and Its Complications

Biologic diagnosis of pregnancy. E. ENGELHORN. München. med. Wchnschr., 1913, lx, 587. [199]

An uncontrollable vomiting of pregnancy treated by direct infusion of blood from a pregnant woman. VIANNAY. Loire méd., St. Étienne, 1913, xxxii, No. 4.

Influence of pregnancy on death-rate of tuberculosis in the Netherlands. C. VAN TUSSENBROCK. Niederl. gynæc. Ges., Sitzungsber., Feb. 9th, 1913. [199]

Tubal pregnancy. S. T. YEATTS. Ky. M. J., 1913, xi, 397.

The influence of ectopic pregnancy on the blood supply of the uterus with special reference to uterine bleeding; based on the study of 25 injected uteri associated with ectopic pregnancy. J. A. SAMPSON. Tr. Am. Gynec. Ass., 1913, May. [199]

Ectopic pregnancy occurring twice in the same patient. A. ANDREWS. Australas. M. Gaz., 1913, xxxiii, 232. [200]

Ectopic gestation and intraperitoneal hæmorrhage from ovarian cysts, mainly corpus luteum. H. REINHARD. Gynäk. Rundschau, Berl., 1913, vii, 201.

Extra-uterine pregnancy; operation three months after term; recovery. W. S. SMITH. Am. J. Obst., N. Y., 1913, lxvii, 669.

Repeated tubal pregnancies. HIRSCH. Monatschr. f. Geburtsh. u. Gynäk., Berl., 1913, xxxvii, No. 4.

Tubal pregnancy before the fourth month. CHEVAL. Gynécologie, Par., 1913, xvii, No. 2.

A case of ruptured very early primary ovarian pregnancy. GEORGE CHIENE. Edinb. M. J., 1913, x, 316. [201]

A study on young ovarian pregnancies. PAUCOT and DEBEYRE. Ann. de gynéc. et d'obst., Par., 1913, x, No. 2.

Interstitial pregnancy. SIEFART. Zentralbl. f. Gynäk., 1913, xxxvii, 375.

Bilateral ovariectomy during pregnancy. FUCHS. Monatschr. f. Geb. u. Gynäk., 1913, xxxvii, 525.

Tumors of the ovary and pregnancy. PUECH and VANVERTS. Écho méd. du nord, Lille, 1913, xvii, No. 13.

Bicornute uterus as an etiological factor in chronic transverse presentation. KLEIN. Zentralbl. f. Gynäk., Leipzig, 1913, xxxvii, No. 13.

Eclampsia. R. T. FERGUSON. J. So. Car. M. Ass., 1913, ix, 92.

Eclampsia; with report of three very unusual cases. EDW. SPEIDEL. Ky. M. J., 1913, xi, 239. [201]

Cases of atypical eclampsia. NUBIOLA. Rev. d. med. y cir., 1913, xxvii, 15. [201]

Pseudo-eclampsia, with two illustrative cases. I. Cerebral tumor. II. Meningitis. H. CROOM. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 213.

The toxæmias of pregnancy. H. E. TULEY. Am. J. Obst., N. Y., 1913, lxvii, 740.

Toxæmia of pregnancy. H. M. TIGERT. South. Pract., 1913, xxxv, 151.

Cæsarean section. H. C. ALLEN. North Am. J. Homeop., 1913, xxviii, 207.

The present status and indication for abdominal Cæsarean section. H. I. KING. J-Lancet, 1913, xxxiii, 200.

Abdominal Cæsarean section. E. A. ILL. J. M. Soc. N. J., 1913, ix, 558.

Cæsarean section; a clinical case. C. I. WENDT. Hahne-mann Month., 1913, xlviii, 282.

Concerning vaginal Cæsarean section. E. D. POD-GORETZKI. Diss. Reviewed in Nachr. d. kaiserl. milit.-med. Akad., 1913, i, 72.

Late Cæsarean section in contracted pelves. SOUTO. Imprensa med., Sao Paulo, 1913, xxi, No. 4.

Transperitoneal cervical evacuation of the pregnant uterus. KAUFMANN. Zentralbl. f. Gynäk., 1913, xxxvii, No. 15.

Attempted abortion in the presence of extra-uterine pregnancy. H. SINGER. Sitzungs-b. d. k.-ung. Gesellsch. d. Ärzte, 1913, 155.

The treatment of abortion. V. W. HARRISON. Va. M. Semi-Month., 1913, xviii, 8.

Hydronhœa gravidarum, abortion after the sixth month, placenta prævia lateralis with breech presentation and delayed separation of placenta. J. CATTANI. Arte ostet., 1913, xxvii, 42.

The insanity of pregnancy. J. L. HUNTER. Mass. M. J., 1913, No. 4, 127.

Premature separation of the normally implanted placenta. QUEISNER. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 529.

Hæmaturia accompanied by oxaluria during pregnancy. PAUCOT. Écho méd. du nord, Lille, 1913, xvii, No. 14.

The electrocardiogram during pregnancy. C. RUBNER. Zentralbl. f. Gynäk., 1913, xxxvii, 449.

Buccal diseases during pregnancy. P. ROSENSTEIN. Deutsche Monatschr. f. Zahnheilk., 1913, xxxi, 170.

Renal disturbances and internal secretion during pregnancy. SCHICKELE. Versamml. d. deutschen Gesellsch. f. Gynäk., 1913.

Placenta prævia centralis, complicated with absolute absence of labor and transverse presentation after vaginal fixation. H. VON ORTENBERG. Zentralbl. f. Gynäk., 1913, xxxvii, 652.

Convulsions in pregnancy. G. TOLDI. Morgagni, 1913, lv, 315.

Pyelonephritis of pregnancy. J. BRUCE-BAYS. So. African M. J., 1913, xi, 116. [202]

Spontaneous lævulouria in pregnancy. GRÄFENBERG. Versamml. d. deutschen Gesellsch. f. Gynäk., 1913.

Intestinal occlusion of pregnancy and its mechanism. DE BOVIS. Semaine méd., Par., 1913, xxxiii, No. 18.

A confinement five years after a Picolini operation on account of uterine inversion. NEUGEBAUER. Zentralbl. f. Gynäk., 1913, xxxvii, No. 15.

Pulmonary tuberculosis in pregnancy. P. C. T. VAN DER HOEVEN. Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kindergeneesk., 1913, ii, 209.

Pulmonary tuberculosis of the pregnant woman. A. JACOBI. N. Y. St. J. Med., 1913, xiii, 192. [202]

Tuberculosis in its relation to pregnancy, labor and the puerperium. R. W. LOBENSTINE. Am. J. Obst., N. Y., 1913, lxvii, 697.

The influence of pregnancy, labor and puerperium on tuberculosis. W. KÖHNE. Beitr. z. Klin. d. Tuberkul., 1913, xxvi, 71. [202]

Labor and Its Complications

A new manipulation during labor. O. KRUG. Zentralbl. f. Gynäk., 1913, xxxvii, 412. [202]

Inertia uteri. E. W. REED. J. Kansas M. Soc., 1913, xiii, 144.

The contraction ring as a cause of dystocia with a description of a specimen removed by hysterectomy during labor. CLIFFORD WHITE. Lancet, Lond., 1913, clxxxiv, 604. [202]

Death from intra-partum hæmorrhage resulting from rupture of the veins of the uterus. LANGES. Zentralbl. f. Gynäk., 1913, xxxvii, No. 15.

Malpositions of the presenting head. P. M. CLIVER. Clinique, 1913, xxxiv, 202.

Brow presentations. M. VILLAPADIerna. Siglo med., 1913, lx, 133.

Breech presentations in the Amsterdam Clinic for women from 1902 to 1911. H. TREUB. Amsterdam. Klin. Nederl. Tijdschr. v. Verloskunde en Gynaecol., 1913, xxii, 103.

Delivery by the breech, with special reference to technique. A. J. SKEEL. Am. J. Obst., N. Y., 1913, lxvii, 711.

The occipito-posterior position. L. I. BREITSTEIN. Calif. St. J. Med., 1913, xi, 163.

The contraction ring as a cause of dystocia. C. WHITE. Clin. J., 1913, xlii, 33.

Hæmorrhages—ante-partum and post-partum. E. A. REEVES. J. Kansas M. Soc., 1913, xiii, 146.

A hæmatoma of the abdominal wall developing during labor. E. VOGT. Zentralbl. f. Gynäk., 1913, xxxvii, 493. [203]

Puerperium and Its Complications

The management of the puerperium and its minor abnormalities. B. A. FEDDE. Med. Rec., 1913, lxxxiii, 752.

The importance of hæmolytic streptococci in the pathology of the puerperium. ZAZKIN. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxviii, 327.

The treatment of post-partum hæmorrhage. S. J. GOODMAN. Lancet-Clin., 1913, cix, 373.

A contribution to the etiology of late hæmorrhages in the puerperium. F. A. LOOFS. Beitr. z. Geburtsh. u. Gynäk., 1913, xviii, 225.

Etiology and treatment of puerperal eclampsia. R. A. GIBBONS. Brit. M. J., 1913, i, 865. [203]

Puerperal infection from the gonococcus. E. McDONALD. Am. Med., 1913, xix, 177. [203]

Puerperal infection. J. H. DINGMAN. Albany M. Ann., 1913, xxxiv, 204.

The local treatment of fresh puerperal infection. A. ABELHEIM. Transvaal M. J., 1913, viii, 306.

A case of puerperal septicæmia complicated by multiple lymphadenitis. M. A. STERN. Vrach. Gaz., 1913, xx, 312.

A case of puerperal sepsis. KLAUHAMMER. München. med. Wchnschr., 1913, lx, 785.

Puerperal fever and its prophylaxis. W. RUBESKA. Prag. Rev. v. Neuropsychopatol., 1913, i, 21.

- Intramural abscess of the puerperal uterus. A. H. HARRIGAN. N. Y. M. J., 1913, xcvi, 444. [204]
 Puerperal inversion of the uterus. ZANGEMEISTER. Deutsche med. Wchnschr., 1913, xxxix, No. 16.

Miscellaneous

- Head injuries of the new-born. D. G. WILCOX. Boston M. & S. J., 1913, clxviii, 568. [204]
 Physiology of the new-born; physiologic uterine hæmorrhage of the new-born. S. K. GOGITIDZE. *Pediatrics*, 1913, i, 13.
 Grave icterus of umbilical origin in a new-born. FAIRISE and BONNET. *Province méd., Par.*, 1913, xxvi, No. 14.
 Intra-uterine traumata in the new-born. C. C. VAN DER HEIDE. *Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kindergeneesk.*, 1913, ii, 39.
 About the irregularity in the decrease of nursing mortality according to days and months. HANSEN. *Ztschr. f. Säuglingssch.*, 1913, v, 92.
 A case of developmental defect in the foetus. A. SETSKO. *Russ. Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 293.
 A human embryo with a chorda canal. O. GROSSER. *Anat. Hefte*, 1913, xlvii, 653.
 A case of congenital spinal-abdominal-genital and intestinal cleft with duplication of the cæcum and appendix. A. LÄWEN. *Beitr. z. pathol. Anat. u. z. allg. Pathol.*, 1913, lv, 575.
 The origin of respiratory movements in the foetus. B. DEDEK. *Lek. rozhledy*, 1913, ii, 82.
 The influence of the X-rays on the foetal membranes. M. KAWASOYE. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 488.
 Phosphatids of the human placenta. C. SAKAKI. *Biochem. Ztschr.*, 1913, xlix, 317.
 The passage of the products of digestion of albumen from the mother to the child. G. BUGLIA. *Biochem. Ztschr.*, 1913, xlviii, 362.
 The internal secretion of the mammary gland. SCHIFFMANN and VYSTAVEL. *Wien. klin. Wchnschr.*, 1913, xxvi, 261. [204]
 The significance of findings of streptococci in the vaginal secretion of women in labor. SACHS. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 17.
 Bacteræmia in abortions and its clinical and theoretical significance. C. RÖMER. *Beitr. z. Klin. d. Infektionskrankh. u. z. Immunitätsforsch.*, 1913, i, 299. [204]
 The excretion of amylolytic ferments in the urine during the toxæmias of pregnancy. D. CORBETT. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 227. [205]
 Vicious formations of the pelvis observed in Uruguay. BELLINI HERNANDEZ. *Rev. de l. hosp., Montevideo*, 1913, vi, No. 2.
 Remarks on Rotter's method of curing contracted pelvis. E. GERSTENBERG. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 409.
 Serodiagnosis of pregnancy according to the method of Abderhalden. ENGELMANN. *Med. Klin.*, 1913, ix, 476.

- Demonstrations of Abderhalden's pregnancy reactions. JONAS. *Deutsche med. Wchnschr.*, 1913, xxxix, 677.
 Abderhalden's biological test of pregnancy. WILLIAMS and PEARCE. *Surg., Gynec. & Obst.*, 1913, xvi, 411. [205]
 Early experiments concerning the use of the Abderhalden reaction in obstetrics. C. DECIO. *Ann. di ostet. e ginecol.*, 1913, xxxv, 198.
 Abderhalden's pregnancy diagnosis and its scientific aspect. HIRSCHFELD. *Schweizer. Rundsch. f. Med.*, 1913, xiii, 534.
 Diagnosis of pregnancy by the optic and the dialysis methods. FREUND and BRAHM. *München. med. Wchnschr.*, 1913, lx, 685.
 Hæmostasis in obstetrics by means of a modification of Momburg's method. E. VAN ERPS. *Clinique, Brux.*, 1913, xxvii, 17. [205]
 Deaths occurring after Momburg's hæmostasis and after lumbar anæsthesia. STERNBERG. *Med. Klin.*, 1913, ix, 166. [206]
 Frank's subcutaneous symphysiotomy. KEHRER. *Arch. f. Gynäk., Berl.*, 1913, xcix, No. 2.
 Sterility in the female, its etiology and treatment; with report of a case of instrumental impregnation. E. McDONALD. *Am. Med.*, 1913, xix, 141. [206]
 Pituitrin as an aid to expulsion; especially in the treatment of placenta prævia. E. HAUCH and L. MEYER. *Gynäk. Rundschau*, 1913, vii, 132. [207]
 Hyoscine-morphine and pituitrin in parturition. W. E. KNIGHT. *South African M. Rec.*, 1913, xi, 89. [207]
 Treatment of urinary retention with pituitrin. F. EBELER. *Ztschr. f. gynäk. Urol.*, 1913, iv, 55. [207]
 The clinical value of the combination of adrenalin and hypophysin. B. A. HOUSSAY. *Wien. klin. Wchnschr.*, 1913, xxvi, 489.
 The clinical action of electargol. F. DAELS. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 329. [207]
 Organotherapy by extracts of the suprarenal glands in obstetrics. ZANGFRONINI. *Morgagni*, 1913, lv, 314.
 Pantopon. O. VON BOLTENSTERN. *Abhandl. a. d. Ges.-Geb. d. prakt. Med.*, 1913, xiii, 93. [208]
 Method of non-ligation of the umbilical cord. A. N. RACHMANOFF. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 459. [208]
 Demonstration of a foetus with a solid embryoma of coccyx. AULHORN. *München. med. Wchnschr.*, 1913, lx, 667.
 A new obstetrical forceps. E. McDONALD. *Am. Med.*, 1913, xix, 163. [208]
 History of obstetric forceps. A. J. KILPATRICK. *J. M. Ass. Ga.*, 1913, ii, 357.
 On the action of hypophyseal extract. LIEVEN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 337. [208]
 Obstetrical surgery. T. B. COULTER. *J. Okla. St. M. Ass.*, 1913, v, 502.
 Forensic obstetrics. G. H. WAASBERGEN. *Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kindergeneesk.*, 1913, ii, 226.

GENITO-URINARY SURGERY

Kidney and Ureter

The relation between chromaffin substance and adrenalin in the suprarenal capsules. W. O. NOWICKI. *Przegl. chir. i. ginek.*, 1913, viii, 169.

Radiodiagnosis of pseudo-calculi of the kidney. PONZIO. *Arch. d'électric. méd.*, Bordeaux, 1913, xxi, No. 354.

The bacteriology and bacteriotherapy of renal calculus and its sequels. A. P. OHLMACHER. *J. Am. M. Ass.*, 1913, lx, 1213. [209]

Unilateral kidney calculus complicated by ureterocele of the opposite side. B. S. BARRINGER. *Interst. M. J.*, 1913, xx, 343.

Hydropyonephrosis associated with calculi; almost complete congenital absence of the kidney. MARION. *J. d'urol.*, Par., 1913, iii, No. 4.

Conservative surgical method in operating for stone in the kidney. W. E. LOWER. *Cleveland M. J.*, 1913, xii, 260. [209]

Pyelotomy for the removal of renal calculi. D. N. EISENDRATH. *J. Am. M. Ass.*, 1913, lx, 1145. [209]

Indications for pyelotomy for renal lithiasis. C. TECOMENNE. *Scalpel et Liège méd.*, 1913, lxxv, 706.

Grave kidney lesions with vesical symptoms only. H. A. FOWLER. *Va. M. Semi-Month.*, 1913, xviii, 29.

Floating kidney, uncontrollable vomiting and exaggerated emaciation. MUNOZ. *Gac. d. Sur. de España*, 1913, xxxi, 173.

The embryogenetic relationships of tumors of the kidney, suprarenal, and testicle. L. B. WILSON. *Ann. Surg.*, Phila., 1913, lvii, 522. [210]

Three unusual cases of renal tumor, with a discussion of the operative treatment of the condition. J. S. JOLY. *Proc. Roy. Soc. Med.*, 1913, vi, 186. [211]

Serous cysts of the kidney. BLANCHARD. *Gaz. méd. de Nantes*, 1913, xxxi, No. 13.

Polycystic kidney; nephrectomy; cure of four and one-half years' standing. DESGOUTTES and OLIVIER. *Lyon chir.*, 1913, ix, 415.

Tuberculosis of the kidney. D. N. EISENDRATH. *Interst. M. J.*, 1913, xx, 299. [211]

Tuberculosis of the kidney. P. A. BENDIXEN. *Iowa M. J.*, 1913, xix, 502.

A new method for the diagnosis of renal tuberculosis. BUERGER. *J. d'urol.*, Par., 1913, iii, No. 4.

Diagnosis and treatment of bilateral renal tuberculosis. PERRIER. *Rev. méd. de la Suisse Rom.*, Genève, 1913, xxxiii, No. 4.

Common ocular changes in nephritis. E. M. ALGER. *Post-Graduate*, 1913, xxviii, 331. [212]

The prognosis in nephritides. STRAUZ. *Ztschr. f. Urol.*, 1913, vii, No. 5.

Symptoms of intestinal occlusion in nephritis colic. QUÉNU. *Bull. méd.*, 1913, xxvii, 207.

A case of sublimated intoxication. VAN MEERDEVOORT. *Ned. Maandschr. v. Verlosk. en Vrouwenz. en Kinder-geneesk.*, 1913, iii, 154.

Intermittent pyuria due to infection of the prostatic utricle. A. J. UNDERHILL. *J. Am. M. Ass.*, 1913, lx, 1073. [212]

Dilatation and infection of the renal pelvis. F. VOELCKER. *Ztschr. f. urol. Chir.*, Leipz., 1913, i, 112.

A case of pyelography in which collargol penetrated into the uriniferous tubules and the Malpighian bodies of the

kidney. ABRAHAM TROELL. *Hygiea*, Stockholm, 1913, lxxv, 176.

Unilateral renal hæmaturia cured by pelvic injections of adrenalin. J. R. CAULK. *Interst. M. J.*, 1913, xx, 348. [212]

Anatomical and functional diagnosis of renal affections. LUCARELLI. *Clin. chir.*, Milano, 1913, xxi, No. 3.

The effect of successive ligation of the renal arteries on the nitrogen balance. J. D. PILCHER. *Cleveland M. J.*, 1913, xii, 246.

Autolysis of the tissues of nephrectomized animals. FEDELI. *J. de physiol. et de path. gén.*, Par., 1913, xv, No. 2.

The future of the nephrectomized. POUSSON. *Am. J. Urol.*, 1913, ix, 113. [213]

The technique and results of lateral (paraperitoneal) nephrectomy. A. MEDOT. *Am. J. Urol.*, 1913, ix, 177. [214]

Ligature of the renal artery and vein as a substitute for nephrectomy. T. H. KELLOCK. *Proc. Roy. Soc. Med.*, 1913, vi, 179. [214]

Nephrectomy for polycystic condition of the kidney. G. TORRANCE. *Am. J. Obst.*, N. Y., 1913, lxxvii, 736.

Presentations concerning renal surgery. ISRAEL. *Ztschr. f. Urol.*, 1913, vii, No. 5.

Some aspects of renal surgery. RAMON GUITERAS. *Canad. Pract. & Rev.*, 1913, xxxviii, 191. [215]

General remarks on the diagnosis of surgical diseases of the kidney. G. P. GRIGSBY. *Ky. M. J.*, 1913, xi, 288.

The surgery of the single and horseshoe kidney. C. H. MAYO. *Ann. Surg.*, Phila., 1913, lvii, 511.

Is decapsulation of the kidneys for chronic Bright's disease justifiable? S. LLOYD. *Post-Graduate*, 1913, xxviii, 338. [215]

The renal function after decapsulation. LA PEYRE. *J. de physiol. et de path. gén.*, Par., 1913, xv, No. 2.

Notes on functional examination of the kidney. SCHLAYER. *München. med. Wchnschr.*, 1913, lx, 800.

Phenolsulphonaphthalein as a determinate of kidney function. H. K. BONN. *J. Indiana St. M. Ass.*, 1913, vi, 154.

A method of classification, diagnosis and therapy of kidney disorders, based on functional testing. H. E. BARIGHT. *Med. Rec.*, 1913, lxxxiii, 699. [215]

Some clinical observations on Ambard's method. PERARD. *Arch. prov. de chir.*, Par., 1913, xxii, No. 3.

Two clinical lectures on calculus in the upper urinary tract. F. J. STEWARD. *Clin. J.*, 1913, xli, 409.

Impacted ureteral calculi. BOROSS. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Surgical treatment of calculi of the pelvic ureter. LEMOINE. *J. d'urol.*, Par., 1913, iii, No. 4.

Calculi of the intra-parietal portion of the ureter. PASCUAL. *J. d'urol.*, Par., 1913, iii, No. 4.

The modern treatment of ruptures of the ureter. MARION. *J. d'urol.*, Par., 1913, iii, No. 4.

Accessory ureters. A. PAWLOFF. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 425.

Radiographic exploration of the ureter and the accessory hollow viscera after injection of opaque mixtures. THÉVENOT. *Province méd.*, Par., 1913, xxvi, No. 14.

Recent progress in ureteropyelography. W. F. BRAASCH. *J. Mich. St. M. Soc.*, 1913, xii, 189. [215]

Technique of circular ureterorrhaphy. PROUST and BUQUET. *J. de Chir.*, 1913, x, 417. [216]

Ureteral catheter diagnosis and therapy. H. K. BONN. Indianapolis M. J., 1913, xvi, 137. [218]

Ureteral catheterization from the therapeutic point of view. Considerations on the diagnosis and prognosis of renal tuberculosis. NOGUEIRA. Rev. de l. hosp., Montevideo, 1912, v, No. 12.

Bladder, Urethra and Penis

Intravesical diagnosis and treatment. L. BUEGER. N. Y. M. J., 1913, xcvii, 857.

Observations of vesical calculi. L. SEXTON. New Orleans M. & S. J., 1913, lxxv, 744.

Vesical calculus producing a protrusion into the rectum. GONARD. Bull. méd. de Algérie, Alger, 1913, xxiv, No. 6.

A case of an unusual form of vesical stone attached to a foreign body. G. W. MALY. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, 89.

A rare case of a large vesical diverticulum, packed with calculi. NOGIER and REYNARD. J. d'urol., Par., 1913, iii, No. 4.

Foreign bodies in the male bladder. W. C. BRYANT. Pittsburgh M. J., 1913, i, 15.

The male bladder changes in form and position from infancy to old age. F. R. WRIGHT. J.-Lancet, 1913, xxxiii, 196.

Hernias of the bladder. CHUDOVSKY. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Once more my suggestion of a modification of the procedure of Cuneo, Heitz-Boyer, and Hovelacque for the cure of vesical ectopy. FRANCESCA LASTARIA. Arch. ital. di ginec., 1913, xvi, 43.

Vesical ectopy; plastic surgery of the bladder and the urethra. JAN. KIELKIEWICZ. Przegl. chir. i ginek., 1913, viii, 228.

Treatment of urinary fistulae by operation after Marion's method, consisting in derivation of the urine. PULIDO. Cronica med., Valencia, 1913, xxv, 80.

Fulguration treatment of bladder tumors. HERMAN L. KRETSCHMER. Illinois M. J., 1913, xxiii, 353.

A case of malignant tumor of the bladder of syncytial structure. BLECHER and MARTIUS. Ztschr. f. Urol., 1913, vii, No. 5.

Vesical tumors among workmen employed in anilin factories. LEWIN. Ztschr. f. Urol., 1913, vii, No. 5.

The pathology and treatment of callous ulcer of the bladder. L. BUEGER. Med. Rec., 1913, lxxxiii, 656. [219]

Cysts of the bladder. HOTTINGER. Folia urol., Leipzig, 1913, vii, No. 7.

Tuberculosis of the bladder and prostate. W. H. RENDELMAN. Iowa M. J., 1913, xix, 499.

Chronic cystitis and retention of urine; treatment by drainage and its beneficial effect upon damaged kidneys. DAVID NEWMAN. Practitioner, Lond., 1913, xc, 672. [219]

Operative treatment of unyielding cystitis, vesical curettage and temporary fistula. UNTERBERG. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Therapeutic fistulization of the bladder. LOUMEAU. J. de méd. de Bordeaux, 1913, xliii, No. 7.

Cystoscopy from 1906 to 1912. JACOBY. Folia urol., Leipzig, 1913, vii, No. 7.

Suprapubic cystostomy. CUMSTON. N. Y. M. J., 1913, xcvii, 646. [220]

Clinical contribution on the employment of cystoscopy for the restoration of vesical function. CARMELO FERRO. Policlin., Roma, 1913, xx, 509.

Permeability and absorbent power of the bladder. NICLOUX and NOWICKA. J. de physiol. et de path. gén., Par., 1913, xv, No. 2.

Injection of gas into the bladder. FERRON. J. d'urol., Par., 1913, iii, No. 4.

A case of exstrophy of the bladder treated by the operation of Heitz-Boyer-Hovelacque. GOSSET. Bull. et mém. Soc. de chir. de Par., 1913, xxxix, 229. [220]

Repair of a defect of the urethra by the vermiform appendix. O. VON ANGERER. Beitr. z. klin. Chir., 1913, lxxxiii, 678.

Complete rupture of the perineal urethra; operation in one stage. MARIAU. Gaz. méd. de Picardie, Amiens, 1913, xxxi, No. 4.

Permanent results obtained by the various methods of treating stricture of the urethra. RASKAY. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

Excision and suture in the treatment of dense, close, urethral strictures. C. G. CUMSTON. Ann. Surg., Phila., 1913, lvii, 536. [221]

The proper lubricant and how to use it in urethral instrumentation. THOS. M. PAUL. Med. Herald, 1913, xxxii, 149.

Polypi of the urethra. UTEAU and SAINT-MARTIN. J. d'urol., Par., 1913, iii, No. 4.

Urethral and periurethral lithiasis. V. C. PEDERSEN. N. Y. M. J., 1913, xcvii, 482. [221]

Plastic surgery of the male urethra. S. KLJUTSCHAREW. Chirurgia, St. Petersburg., 1913, xxxii, 45.

Prolonged priapism and its surgical treatment. WORMS and AMANT. Gaz. d. hôp., Par., 1913, lxxxvi, No. 44.

Gonococcal urethritis in a boy aged seventeen months. A. SMITH and C. S. MCKEE. Brit. M. J., 1913, i, 878.

The treatment of gonorrhoeal and other infections with digestive bacterial extracts. J. O. HIRSCHFELDER. J. Am. M. Ass., 1913, lx, 1061.

Accessory canals of the penis and gonorrhoeal affections of them. HÜBNER. Berl. klin. Wchnschr., 1913, l, No. 16.

A new treatment for acute gonorrhoea. O. L. MULOT. Med. Rec., 1913, lxxxiii, 709.

New diagnostic methods in gonorrhoeal affections. R. M. FRONSTEIN. Med. Rundschau, 1913, xl, 225.

Therapy of gonorrhoea and its most frequent mistakes. FRANZ VON VERESS. Dermatol. Wchnschr., 1913, lvi, 302.

Genital Organs

Epididymotomy: A plea for a rational treatment of epididymitis. R. M. CULLER. Am. J. Urol., 1913, ix, 193. [222]

Tubercular epididymitis and tuberculous testicle. G. M. MIDDLETON. Iowa M. J., 1913, xix, 511.

The latest experimental researches on the internal secretion of the testicle. BARNABO. Policlin., Roma, 1913, xx, No. 4.

A case of torsion of the vas deferens in an inguinal ectopy of the testicle. PIETRO TASCA. Riforma med., 1913, xxix, 404.

Torsion of the testicle. SOCHTSCHIN. Chirurgia, 1913, xxxiii, 52.

The surgical treatment of ectopia testis. FISCHER. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.

The pathology and diagnosis of malignant disease of the descended and undescended testicle. G. M. SCARBARI. Am. J. Urol., 1913, ix, 169.

An unusual type of hydrocele. J. B. SQUIER. J. Am. M. Ass., 1913, lx, 1226.

Diagnostic hints for the examination of prostatic subjects. JOSEF ENGLISCH. Allg. Wien. med. Ztg., 1913, lviii, 139.

Tuberculosis of the prostate. GOTZL. Folia urol., Leipzig, 1913, vii, No. 7.

Prostatic abscess. J. A. DAY. *Urol. & Cutan. Rev.*, 1913, xvii, 193.

Iodipin per clysmia in prostatitis. L. FISCHER. *München. med. Wchnschr.*, 1913, lx, 651.

The technique of hypogastric prostatectomy; the employment of an enucleator-fingerstall. BENSÄ. *J. d'uro.*, Par., 1913, iii, No. 4.

Prostatectomy. E. S. JUDD. *Surg., Gynec. & Obst.*, 1913, lxi, 379.

Prostatectomy. H. A. MOORE. *South. Pract.*, 1913, xxxvi, 164.

Prostatectomy; suspension of the bladder. GEO. E. ARMSTRONG. *Canad. M. Ass. J.*, 1913, iii, 167. [222]

Prostatectomy by a composite method. A. E. ROCKEY. *Surg., Gynec. & Obst.*, 1913, xvi, 424. [222]

Pre- and post-operative treatment of prostatectomy. WM. N. WISHARD. *Lancet-Clin.*, 1913, cix, 258. [222]

Suprapubic prostatectomy; report of case. A. L. PARSONS. *Ky. M. J.*, 1913, xi, 321.

The after-treatment of suprapubic prostatectomy. KOLISCHER. *Surg., Gynec. & Obst.*, 1913, xvi, 332. [223]

A series of 236 cases of total enucleation of the prostate performed during the two years 1911-12. P. J. FREYER. *Lancet, Lond.*, 1913, clxxxiv, 1018. [223]

The operative treatment of prostatic hypertrophy. HUGH CABOT. *Lancet-Clin.*, 1913, cix, 260. [224]

The physical and intellectual energies after prostatectomy. LEGUEU. *Bull. méd., Par.*, 1913, xxvii, No. 33.

Surgery of prostatic atrophy. POSNER. *Ztschr. f. Urol., Leipz.*, 1913, vii, No. 5.

Miscellaneous

The colon bacillus in genito-urinary diseases. PEDERSEN. *Tr. Am. Ass. Genito-Urin. Surg.*, 1913, May. [225]

Spontaneous gangrene of the genital organs in man and in woman. SPILLMAN and BENECH. *Paris méd.*, 1913, ii, 319.

Pyuria and the pyurics. UTEAU and SAINT-MARTIN. *Sud méd., Marseille*, 1912, No. 1959.

Uric acid calculi. WILLIAM N. PORTER. *N. Y. M. J.*, 1913, xcvi, 539. [225]

Sexual impotence in the male. V. BLUM. *Am. J. Urol.*, 1913, ix, 197.

The legal bases of sterilization. ROSENFELD. *Viertel-jahrschr. f. gerichtl. Med.*, 1913, xlv, 160.

Recent work in genito-urinary surgery. J. W. THOMSON WALKER. *Practitioner, Lond.*, 1913, xc, 701. [225]

Modern urinary surgery; points for the practitioner. HENRY CURTIS. *Practitioner, Lond.*, 1913, xc, 686.

SURGERY OF THE EYE AND EAR

Eye

Traumatic exophthalmos. DUTOIT. *Cor.-Bl. f. Schweiz. Ärzte*, 1913, xliii, No. 13.

Report of a case of injury to the eye. G. R. S. CORSON. *Penn. M. J.*, 1913, xvi, 566.

Removal of steel from the eye. J. W. MCCOLLOM. *Med. Sentinel*, 1913, xxi, 869.

A piece of glass in the crystalline lens, with description of the eye three and a half years after the accident. J. HERBERT CLAIBORNE. *Ann. Ophth.*, 1913, xxii, 240.

Burn of eye-ball due to caustic contents of golf-ball. L. W. CRIGLER. *J. Am. M. Ass.*, 1913, lx, 1297.

Cystic distention of the lachrymal sac; operation on nasal duct in the nose (West's operation). D. MCKENZIE. *Proc. Roy. Soc. Med.*, 1913, vi, 102. [227]

Surgery of the lachrymal ducts. WEST. *Arch. f. Laryngol. u. Rhinol., Berl.*, 1913, xxvii, No. 2.

The extirpation of the lachrymal sac. WRIGHT. *Northwest Med.*, 1913, v, 106. [227]

Phlyctenular eye diseases in children. JOHN ALLEN. *Pediatrics*, 1913, xxv, 218.

Report of a case of congenital ptosis in both eyes relieved by the Motaix operation. KENNON. *Tr. Am. Ophth. Soc.*, 1913, May. [227]

The treatment of congenital ptosis by repair of the levator palpebrae superioris with the rectus superioris. L. WEEKERS. *Ann. de la soc. méd.-chir. de Liège*, 1913, lii, 43.

A case of congenital apron of the palpebral conjunctiva. H. H. TYSON. *Tr. Ann. Ophth. Soc.*, 1913, May. [227]

Treatment of vernal conjunctivitis. A. BRAV. *Therap. Gaz.*, 1913, xxxvii, 247.

Another case of gonorrhoeal conjunctivitis aborted by a two per cent solution of nitrate of silver. J. H. CLAIBORNE. *N. Y. St. J. Med.*, 1913, xiii, 212.

Radium treatment in a tumor of the orbit. C. F. CLARK. *Ohio St. M. J.*, 1913, ix, 171. [228]

Carcinoma about the eye. E. H. SKINNER. *J. Mo. St. M. Ass.*, 1913, ix, 232.

Epibulbar carcinoma; histological examination of the specimen. DE SCHWEINITZ and SHUMWAY. *Tr. Am. Ophth. Soc.*, 1913, May. [228]

Concerning two cases of dermoid at the sclerocorneal margin. BURTON CHANCE. *Ann. Ophth.*, 1913, xxii, 268.

A case of multiple double lipodermoids of the conjunctivæ and cornea, accompanied by intrabulbar and other anomalies. K. L. STOLL. *Lancet-Clin.*, 1913, cix, 393.

Corneal ulceration. C. J. STALLWORTH. *Md. M. J.*, 1913, lvi, 96. [228]

Degeneration of the corneas of a man and adult son. B. CHANCE. *Tr. Am. Ophth. Soc.*, 1913, May. [229]

Two cases of conical cornea with cataract. HARROWER. *Tr. Am. Ophth. Soc.*, 1913, May. [229]

Control of the eye in cataract operations. F. W. SUMNER. *Ophth. Rev.*, 1913, xxxii, 105. [229]

A method of dealing with the capsule after cataract operations. D. F. REEDER. *Ophth. Rec.*, 1913, xxii, 184. [230]

Cataract and the Smith operation. P. B. WING. *Northwest Med.*, 1913, v, 105.

The intracapsular cataract operation from the viewpoint of an assistant. J. W. MILLETTE. *Ohio St. M. J.*, 1913, ix, 175. [230]

Death after cataract operation. EDWARD J. BERNSTEIN. *Ann. Ophth.*, 1913, xxii, 260.

Sarcoma of the choroid, not demonstrable by the ordinary transilluminator. A. GREENWOOD. *Tr. Am. Ophth. Soc.*, 1913, May. [230]

Two cases of chronic glaucoma simplex treated by oridotasis. HARROWER. *Tr. Am. Ophth. Soc.*, 1913, May. [230]

Orbital cellulitis; a fatal case following disease of the accessory sinuses of the nose. WIENER. *N. Y. M. J.*, 1913, xcvi, 866. [230]

Traumatic posterior lenticonus. J. HERBERT FISHER. *Ophth. Rev.*, 1913, xxxii, 97. [231]

The successful proof of the intra-ocular fluid current based on the principle of mechanical adaptability. J. KUSCHEL. *Ann. Ophth.*, 1913, xxii, 222.

The deficient results in the experimental findings regarding the fluent current of the eye. J. KUSCHEL. *Ann. Ophth.*, 1913, xxii, 213.

Some notes of visual disturbances due to diseases of the nasal accessory cavities. H. MOULTON. *Ann. Ophth.*, 1913, xxii, 255.

The significance of pupillary inequality. J. M. ROBINSON. *J.-Lancet*, 1913, xxxiii, 204.

Ear

The significance of pain in the ear. M. YEARSLEY. *Clin. J.*, 1913, xli, 401.

Bacteriology of the ear. E. M. WEAVER. *Ohio St. M. J.*, 1913, ix, 173.

Upon the present status of otosclerosis. ALFRED DENKER. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 1.

The loss of hearing in one ear from injury. J. H. BARNES. *Okla. St. M. Ass.*, 1913, v, 496.

Case of epithelioma of the auricle and cervical glands; removal of auricle and glands. N. PATTERSON. *Lancet*, Lond., 1913, clxxxiv, 962. [231]

Tumors of the acusticus. J. BERLSTEIN and NOWICKI. *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Berl., 1913, xlvii, 415.

Otorrhea of twenty years' standing cured by surgery and Wright's vaccine. LABOURE. *Rev. heb. de laryngol., d'otol. et de rhinol.*, Bordeaux, 1913, xxxiv, No. 13.

The importance of early recognition of capsulated cocci in acute otitis. F. E. CUTLER. *Phys. & Surg.*, 1913, xxxv, 154.

Some practical points in the diagnosis and treatment of acute and chronic aural suppuration and their sequelæ. JAS. F. MCKERNON. *Buffalo M. J.*, 1913, lxviii, 513.

Acute suppuration of the middle ear—its neglect and proper treatment. GUSTAV ALEXANDER. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 159.

Acute otitis media; recognition and treatment by the general practitioner. G. C. KNEEDLER. *Pittsburgh M. J.*, 1913, i, 23.

Early puncture in acute suppurative otitis. R. I. LLOYD. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 150.

The structure of the mastoid and the development of the mastoid cells; the influence of the constitution of the mastoid on the development of antrocellular suppuration. MOURET. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 2.

The protective mastoid operation. W. S. BRYANT. *Tr. Am. Otol. Soc.*, 1913, May. [232]

Exposure and curettement of the attic, combined with a modified blood clot as factors in promoting rapid mastoid healing. BLACKWELL. *Tr. Am. Otol. Soc.*, 1913, May. [233]

A skull trephined for mastoid caries and lateral sinus thrombosis. B. A. RANDALL. *Tr. Am. Otol. Soc.*, 1913, May. [233]

The history of the mastoid operation. SCHMIEGELOW. *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftwege*, 1913, lxviii, No. 1.

When to operate on the labyrinth in labyrinth infection secondary to purulent otitis media. G. E. SHAMBAUGH. *Tr. Am. Otol. Soc.*, 1913, May. [233]

Labyrinthitis. A. ANGELL. *North Am. J. Homeop.*, 1913, xxviii, 212.

Indications for and results of operative treatment of otitic meningitis. E. W. DAY. *Surg., Gynec. & Obst.*, 1913, xvi, 369. [234]

Report of three cases of otitic meningitis, treated by drainage of the cisterna magna. DENCE. *Tr. Am. Otol. Soc.*, 1913, May. [234]

Etiology, symptomatology and operative treatment of brain abscesses developing from suppuration of the middle ear. UDVARHELYI. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Radical operation on the ear; its technique and after-treatment; with a contribution on perichondritis of the auricle. KULENKAMPPF. *Beitr. z. klin. Chir.*, 1913, lxxxiii, No. 3.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Operative treatment of adhesions of the wings of the nose. DAMM. *Arch. f. Laryngol. u. Rhinol.*, Leipz., 1913, xxvii, No. 2.

The nascent iodine treatment of lupus nasi. P. W. BEDFORD. *Brit. M. J.*, 1913, i, 767.

Cysts in the region of the vestibule of the nose. BLUMENTAL. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege*, Wiesb., 1913, lxviii, No. 1.

Correction of deformities of the nose by intranasal operations and prothetic inclusions. GAREL and GIGNOUX. *Lyon méd.*, 1913, cxx, No. 14.

The causes of perforation of the nasal septum. W. B. CHAMBERLIN. *Ohio St. M. J.*, 1913, ix, 169.

Reorganization of the cartilage of the nasal septum after the submucous resection of the latter. SMOYLENKO.

Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., Würzb., 1913, vi, No. 1.

Anent foreign bodies in the nasal fossæ. C. C. MAPES. *Pediatrics*, 1913, xxvi, 233.

Nasal hæmorrhage following turbinectomy in a hæmophilic treated by the injection of human blood serum. LINN EMERSON. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 183.

Spheno-choanal polypi. KUBO. *Arch. f. Laryngol. u. Rhinol.*, Leipz., 1913, xxvii, No. 2.

Primary malignant tumors of the nasal cavity and the accessory sinuses. SAFRANEK. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 1.

Development of the accessory sinuses of the nose. VITTORIO NICOLAI. *Arch. ital. di otol., rinol. e. laringol.*, 1913, xxiv, 89.

- Sinusitis. C. ZUGG. J. Kansas M. Soc., 1913, xiii, 151.
Abscess-producing suppuration of the frontal sinus. LANG. Beitr. z. klin. Chir., 1913, lxxiv, No. 1.
- Further observations on some anatomical and clinical relations of the sphenoid sinus to the cavernous sinus and the third, fourth, fifth, sixth and vidian nerves. G. SLUDER. Tr. Am. Laryngol. Ass., 1913, May. [235]
The exploratory opening of the sphenoid sinus. C. P. GRAYSON. Penn. M. J., 1913, xvi, 558.
- Treatment of suppurating affections of the accessory sinuses of the nose. A. VON ZUR MÜHLEN. St. Petersburg. med. Ztschr., 1913, xxxviii, 43.
- Two cases of air embolus following exploratory puncture of the antrum of Highmore. H. M. BOWEN. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 180.
- The treatment of suppuration of the antrum of Highmore. E. B. GLEASON. Penn. M. J., 1913, xvi, 554.
- A skull with malformation of the temporal bone and distortion and absorption of the basilar region as if by pressure of a naso-pharyngeal growth. B. A. RANDALL. Tr. Am. Laryngol. Ass., 1913, May. [235]
- The value of naso-pharyngeal surgery in the treatment of chronic exudative otitis media. H. O. REIK. Tr. Am. Otol. Soc., 1913, May. [235]
- On the function of the tonsils. LOUIS M. FREEDMAN. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 186.
- The faucial tonsils as a focus for systemic infection. G. E. SHAMBAUGH. Tr. Am. Laryngol. Ass., 1913, May. [236]
- Tuberculosis of the pharyngeal tonsil in the adult. BRÜGGEMANN. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxviii, No. 1.
- The results of tonsillectomy. B. D. SHEEDY. Med. Rec., 1913, lxxxiii, 654.
- The results in a series of cases of tonsillectomy three to four years after operation. J. P. CLARK. Tr. Am. Laryngol. Ass., 1913, May. [236]
- Enucleation of tonsils and removal of adenoids under gas anæsthesia. J. F. O'MALLEY. Brit. M. J., 1913, i, 699. [237]
- Experiences with tonsillectomies performed by means of Aurelius Réthi's expressor. ARPAD LENGVEL. Arch. f. Laryngol. u. Rhinol., Berl., 1913, xxvii, 349.
- Tonsillectomy, with consideration of a new procedure after Klapp. RICHARD SCHREIBER. Therap. d. Gegenw., 1913, liv, 145.
- The control of hæmorrhages following surgical intervention on the tonsils and the larynx. AURELIUS RÉTHI. Arch. f. Laryngol. u. Rhinol., Berl., 1913, xxvii, 357.
- The control of secondary hæmorrhages after surgical interventions on tonsils and larynx. RÉTHI. Arch. f. Laryngol. u. Rhinol., Berl., 1913, xxvii, No. 2.
- Adhesions of uvula and soft palate to posterior pharyngeal wall in a girl aged 12. DONELAN. Proc. Roy. Soc. Med., 1913, vi, 82. [237]
- Ablation of adenoid vegetations; operative technique. VILLETTE. J. d. sc. méd. de Lille, 1913, xxxvi, No. 13.
- Certain dangers of the adenoid operation. W. E. GROVE. Bull. Johns Hopkins Hosp., 1913, xxiv, 112. [237]
- Hypopharyngoscopy. RENE MOREAUX. Presse otolaryngol. Belge, 1913, xii, 1.
- Present-day examination of the larynx. BOUTIN. Arch. méd.-chir. de Province, Poitiers, 1913, viii, No. 3.
- Direct endoscopic examination of the larynx, trachea, and bronchi; technique, indications and results. C. BURGUES. Thèse de doct., Montpellier, 1913. [238]
- Acute diffuse swelling of the mucous membrane of the larynx, provoked by transient irritation by a foreign body. MÜLLER. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxviii, No. 1.
- Tumors of the larynx. ROBERT LEVY. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 133.
- Tuberculosis of the larynx. W. SANDERSON. Brit. M. J., 1913, i, 703. [238]
- Carcinoma of the larynx on luetic basis. PAUL LEDERMANN. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxviii, 20.
- End-results in two cases of carcinoma of the larynx which were treated by early external conservative operation. VEDOVA-CATELLANI. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, No. 1.
- Operation on the larynx by the direct path of access. POLLATSCHKE. Beitr. z. klin. Chir., 1913, lxxxiv, No. 1.
- Pyorrhœa alveolaris. R. H. WALKER. Va. M. Semi-Month., 1913, xviii, 42.
- Pyorrhœa alveolaris. S. W. BUDD. Va. M. Semi-Month., 1913, xviii, 40.
- Adenoma of the mouth. H. MARX. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxvii, 121.
- Cancer of the tongue. C. RYALL. Brit. M. J., 1913, i, 697. [239]
- Rare but serious affections of the tongue. HENKE. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., Würzb., 1913, vi, No. 1.
- Misplaced mandibular canine. F. R. SMYTH. Proc. Roy. Soc. Med., 1913, vi, 77. [239]
- Cleft palate. J. F. OCHSNER. New Orleans M. & S. J., 1913, lxxv, 727. [239]
- The preparation of the mouth before operation. J. G. TURNER. Proc. Roy. Soc. Med., 1913, vi, 79.
- Some recent work on dental surgery. J. G. TURNER. Practitioner, Lond., 1913, xc, 742.

INTERNATIONAL ABSTRACT OF SURGERY

SEPTEMBER, 1913.

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

ASEPTIC AND ANTISEPTIC SURGERY

Aperlo: Disinfection of the Hands in Surgery
(Sulla disinfezione delle mani in chirurgia). *Clin. chir.*, 1913, xxi, 331.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In an extensive series of experiments the author has endeavored to determine the value of the various methods of disinfecting the hands. During the different phases of the operation the fingers of the operator were dipped into a sterile 10 per cent gelatine solution for 15 seconds. They were rubbed against each other. The gelatine had been hardened by freezing with ice and kept for eight to ten days at 18° C.

The author comes to the following results: (1) Continued washing with warm water and soap, using a sterile brush, is not sufficient to remove the germs from the skin; the result is no better if the washing is continued for an hour. Drying the hands with a sterile towel has no effect. (2) In order to reduce the number of germs, the action of alcohol is indispensable. Cleansing with alcohol without previous disinfection with soap and water gives the best results; it is to be recommended at all times for disinfecting the skin previous to an operation. (3) Washing the hands with a 2 per cent bichloride of mercury solution after the usual method of disinfecting has no effect on the number of germs in the skin. (4) During the operation the germs migrate from the hands into the wound, and in spite of this migration the wound heals. (5) Hands washed for ten minutes in water, then for five minutes in alcohol, and later covered with gloves, are actually sterile; the gloves must be put on properly and washed once more for at least 60 seconds with alcohol. (6) The staphylococcus albus and the ordinary saprophytes of the air are found most frequently on the skin. (7) The concentration of the alcohol, its admixture with iodine, or whether it is in its denaturized form, is of no special importance.

In conclusion, the following methods are recommended:

For emergency disinfection, wash for ten minutes in alcohol (70-95 per cent) either grain or wood spirits.

For ordinary disinfection, wash with water and soap for ten minutes, and then for five minutes in alcohol.

MONNIER.

Gaetano: Disinfection of the Skin with Tincture of Iodine (Contributo clinico-statistico alla disinfezione della pelle contintura iodica). *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 257.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Most of the Italian surgeons favor the use of the Gross method of disinfection of the skin with the tincture of iodine. In various Italian clinics it was determined by means of bacteriological experiments that the results were best when the tincture of iodine was painted on the dry skin, and that it was not so good when soap and water had been used previously. Probably after washing the skin with soap and water the iodine is not able to penetrate the excretory ducts of the subaceous and sweat glands. Some disadvantages were reported from several clinics from the use of the tincture of iodine; e. g., eczema, erythema, and toxic albuminuria. Three post-operative cases of death (Biesolsky, Moscovitz, Patris) have been reported outside of the Italian clinics, where the cause of death was charged to the use of the tincture of iodine. The author thinks these three fatal cases cannot be due to the action of the iodine alone, and that the other injuries mentioned above could have been avoided by the proper use of this method. He uses a freshly prepared solution of six parts of iodine to 100 parts of 95 per cent alcohol, paints it on the dry skin twelve minutes before beginning the operation, and once more two or three minutes later. In a series of 329 cases prepared in this manner for operation, he reports splendid results.

HERHOLD.

Liermann: Modern Treatment of Wounds and First Aid (Moderne Wundbehandlung und erste Wundversorgung). *Zentralbl. f. Gewerbehyg.*, 1913, i, 121. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author recommends the bolus wound paste introduced by him, consisting of "bolus alba," alcohol and glycerin, and his bolus soaps for general use. The soap simplifies the skin disinfection of the hands and of the field of operation, only three minutes being necessary. Water and brush are superfluous when the paste is used, as are all other chemical antiseptics in the preparation of wounds. It is cheap (100 gm. sufficing for fifty dressings) and can easily be carried anywhere in small tubes. These are not all the advantages, as it is inflammable and can be used for emergency sterilization of instruments.

GENEWEIN.

ANÆSTHETICS

Delajenièrè: General Anæsthesia with Lessened Circulation or Exclusion of the Four Extremities in General Anæsthesia (Anestesia general con circulación reducida ó exclusión de los cuatro miembros en la anestesia general). *Clinica mod.*, 1912, xi, 236, and 1913, xii, 41.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has used the method in 114 cases of chloroform and 35 cases of ether narcosis. It is important to apply the binders rapidly so the narcosis can be begun as soon after as possible, because patients complain of disagreeable sensations at the sites of application, even after several minutes. The limbs must be over-filled with blood, so the author recommends lowering the limbs for a short time before applying the binders. If the constriction was not complete, and venous stasis occurred, small intracutaneous hæmorrhages are found after the removal of the constrictors. These disappear shortly leaving no evidence.

Regarding the influences which the diminished circulation exerts upon the whole organism, the following is important: respiration is quickened and more superficial. Delajenièrè has observed average respirations of 30-39 per minute. The polypnea begins to regress the moment one binder is removed, and returns to normal only when all the binders are removed. The pulse remains unaltered. The blood pressure drops 2-3 cm. Narcosis sets in much more rapidly than with the usual method. Usually five minutes are required to produce a deep sleep, as contrasted with nine minutes for the customary anæsthesia. This advantage is seen especially in narcotizing alcoholics. The amount of anæsthetic required is about 50 per cent less. The patient wakes up much more quickly and at times may wake up immediately. The greatest advantage seems to be the absence of the organic disturbances which so frequently accompany chloroform narcosis. Vomiting is much less common and less severe. Post-operative albuminuria is practically absent.

Delajenièrè frequently noted the distinct ad-

vantages of this method in collapse. The loosening of one or two constrictors sufficed to overcome this accident. Entirely apart from the diluting of the blood saturated with the narcotic, the blood from the extremities, loaded as it is with carbon dioxide, has an important rôle in stimulating the medulla oblongata. Thrombophlebitis was seen by the author in only four cases; three of these were gynecological in which the pressure of the leg rests on the dilated popliteal veins may be blamed. The two deaths seen by the author cannot be ascribed to the anæsthetic, because both patients had been given up before the operation. The author considers severe myocarditis and phlebitis as strict contraindications. Absolute indications are affections of the liver and kidneys as well as alcoholism.

LAZARRAGA.

French: Nitrous Oxide Gas, Essence of Orange, Ether, and Sequestration in General Anæsthesia for Operations in the Upright Position. *N. Y. M. J.*, 1913, xcvi, 1061.

By Surg., Gynec. & Obst.

The author expresses the belief that more skillful operative work can be done, less blood lost and less anæsthetic required in operating in the upright position. There are also fewer disagreeable symptoms during the recovery stage. A new operating table-chair is presented. Since using this table-chair there has been marked improvement in the condition of the patient during and after the operation.

The stage of excitement can be bridged by nitrous oxide, but in the opinion of the author it can be done with greater ease and certainty with the essence of orange and ether. It unquestionably requires a large experience with the administration of nitrous oxide gas to enable one to dovetail it so accurately with the ether which follows that the stage of excitement will be eliminated. From tests which were carried on for over a year, the author is convinced that shock from the loss of blood and from the anæsthetic can be materially reduced by the manner of administering it. He states there is no question but that hæmorrhage is reduced if the anæsthetic from the beginning is smoothly administered, the second stage omitted and the patient brought to full surgical anæsthesia without jarring or body disturbance of any kind. The uniform employment of helpful mental suggestion by every individual in contact with the patient up to the time of induction of anæsthesia assists in preventing an excessive discharge of nervous energy through fear, which is one of the elements in the "anoci-association" of Crile. If induction has been satisfactory the anæsthetic not only should be, but must be in many cases, diminished in quantity or withdrawn, as soon as the upright position has been attained, to prevent narcosis becoming too deep for safety. When reflexes begin to reappear the anæsthesia can be continued by the occasional administration of the vapor through the mouth. The fact that only half, or less than half, of

the usual quantity of ether is required to maintain anaesthesia with this method should not deceive one into believing that only partial anaesthesia is obtained, for it is, in reality, a full one.

The sequestration method, in association with the upright position, which has been carried out in fifty-eight cases, reduces still further the loss of blood and the amount of anaesthetic required. Full anaesthesia is maintained for fifteen to twenty minutes after the body is brought to the upright position and the inhaler removed. The average blood loss with the sequestration method whether applied to arms and legs or legs alone, is far below that which occurs without sequestration, and certain operations which with ordinary methods are usually attended with a large loss of blood may be rendered practically bloodless by its use. The method consists in producing hyperaemia of the limbs by means of inflated blood pressure cuffs. These are applied to the arms and legs or to the legs alone. It reduces the amount of blood in the head. No haemorrhage occurs after releasing the cuffs. The amount of pressure made with the cuffs varied from that needed to produce a complete obliteration of the pulse and that needed to produce only a slight change. No injury to the nerves was noted. This is explained by the fact that the pressure was distributed over a wide area and that it was made by a flexible air bag. The pressure was maintained from the end of the induction stage to the time of completing the operation.

By his method the operator is therefore enabled to administer a smaller quantity of an anaesthetic and obtain full anaesthesia; to see the patient put to sleep without the stage of excitement; to stop the administration when the body is brought to the upright position and yet have the anaesthesia prolonged enough to permit relatively long operations to be performed; to secure a greatly lessened loss of blood; and to insure a reduction in, and in many cases an almost complete abolition of, the disagreeable after-effects. It is thus that operations are robbed of their terrors for the patient.

EDWARD L. CORNELL.

Stein: Injury of the Phrenic Nerve in Local Anaesthesia of the Brachial Plexus (Zur Frage der Phrenicuslähmung nach der lokalen Anästhesie des Plexus brachialis). *Zentralbl. f. Chir.*, 1913, xl, 597. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author reports a case in which he had occasion to induce local anaesthesia of the brachial plexus in a woman 20 years of age. Though in other cases he had always found the plexus very easily, here he was unable to find it even after a long search. The patient became restless and complained of severe pains at the point of injection. The operation, which was not pressing, was given up and the needle withdrawn without a drop having been injected. The patient went home. Immediately afterwards severe pains began over the entire left side of the breast and gradually increased in intensity. Breathing was embarrassed and the patient felt very sick.

For the next few days the breath sounds on the right side were markedly decreased. There was no fever, the pain gradually diminished and after two and one-half weeks disappeared entirely. The author thought first of an accidental intercurrent of pleuritis, but the clinical picture did not confirm this supposition. He thinks it most probable that an anomalous branch of the phrenic nerve was injured by the needle or perhaps there was an unusually high anastomosis with the brachial plexus. At any rate a certain amount of caution should be observed; anaesthesia should not be performed on both sides at the same time and the injection should not be made until the presence of paræsthesia is determined.

KULENKAMPFF.

Rost: Anatomical Investigations of Some Cutaneous Nerves, Important for Local Anaesthesia, with Regard to the Point at Which They Penetrate the Fasciæ (Anatomische Untersuchungen einiger für die Lokalanästhesie wichtiger Hautnerven bezüglich ihrer Durchtrittsstellen durch die Fascien). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 455.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Rost calls attention to the variations in the point of exit of the cutaneous nerves through the fascia. As a result successful local anaesthesia is often rendered rather difficult. To intercept the cutaneous nerves of the anterior surface of the thigh, Rost recommends the infiltration of the operative field, as well as the skin and fascia beneath Poupart's ligament and finally the trunk of the femoral nerve should be interrupted. Because the cutaneous nerves vary in this region no rules can be laid down for their injection. The cutaneous nerves of the cervical plexus are anaesthetized by infiltrating them at the posterior border of the sterno-mastoid muscle, as they cannot all be reached at the middle of the muscle border, as is often claimed. To anaesthetize this territory properly the great occipital nerve must be interrupted along its course as well as along the linea nuchae superior and parallel with the border of the trapezius as this nerve is in communication with the cervical group.

HIRSCHEL.

Meyer: Local Anaesthesia and Anaesthesia of Nerve Tracts (Beiträge zur Lokal- und Nervenleitungsanästhesie). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 520. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author describes as "fragmentary local anaesthesia" the process of anaesthetizing only the skin at first, and then the deeper parts during the operation. This procedure makes it easier to find the large nerve trunks, because the patient can localize it himself if slight pressure is applied over the region of the nerve. Moreover, it sometimes aids in the finding of deep-seated foreign bodies. Meyer also suggests anaesthetic solutions in inflamed tissues. He believes that sometimes healing takes place more quickly when this is done, as inflammatory processes are inhibited by local anaesthesia. In replacing fractures, he has found it advantageous

to inject anæsthetic solutions at the site of the fracture. He also recommends the injection of such solutions into the joints for diagnostic purposes, and in making passive movements in chronic arthritis.

For anæsthesia of the shoulder region, he combines Kulenkampff's plexus anæsthesia with the elimination of the supraclavicular nerve by a linear subcutaneous injection along the edge of the sternocleidomastoid muscle. Moreover, the intercostal and intercosto-brachial nerves are cut off by spinal injections. For operations on the hands, he blocks the ulnar nerve at the ulnar epicondyle, the median nerve at the ulnar side of the brachial artery and the radial nerve at the ulnar side of the supinator longus muscle, which is put on a tension. The dorsal cutaneous nerve is reached by a linear injection between the olecranon and the radial epicondyle. For operations on the palmar surface of the hand, he recommends the interruption of the three chief nerves in the region of the wrist-joint by Braun's method.

LÄWEN.

Schlimpert: Concerning Sacral Anæsthesia.
Surg., Gynec. & Obst., 1913, xvi, 488.

By Surg., Gynec. & Obst

After a short review of the history of sacral anæsthesia (Cathelin, Stöckel, Læwen and Gros), Schlimpert describes in detail the technique as used at the Freiburg Frauenklinik for low and high extradural anæsthesia. A fairly deep Dämmerschlaf is brought about by giving veronal (1 gm. the evening before, and ½ gm. the morning of the operation) and scopolamin-narcophin, some hours before operation. The sacral canal is punctured by introducing a hollow tube into the canal through the hiatus canalis sacralis. First, a test fluid (NaClO, 9 per cent) is injected to make sure that the sacral canal has been entered; easy injection and no subcutaneous swelling should be observed. By lowering the pelvis it may be determined whether a vein of the sacral plexus or the lumbar cavity has been punctured — blood or a watery fluid will then issue from the needle.

For anæsthetizing a warm (38° C.) solution of novocain in bicarbonate of sodium (Læwen) is used. Adrenalin is added and, to prevent the adrenalin being oxydized in the alkaline fluid, natrium sulfurosum.

For low anæsthesia (below the symphysis) 0.6 gm. novocain is considered the normal dose; for high anæsthesia (abdominal operations) 0.7 gm. More or less is given according to weight of patient, age, cachexia, icterus, quality of Dämmerschlaf and probable duration of operation. The doses vary between 0.5 and 0.8 gm.

The results for low anæsthesia are: Duration from three fourths to one and one fourth hours; of 114 cases, in 62 (54.4 per cent) the anæsthesia was complete, while 13 (11.4 per cent) were failures. For high anæsthesia, duration about three fourths hours, of 342 cases, 159 (46.5 per cent) were complete, 19 (25.6 per cent) were failures.

In the rest, some inhalation-narcosis had to be given, the amount being generally small (10-15 gm. ether).

A collateral action consisting of general pallor, due to a fall in blood-pressure, was observed for 2-3 hours. No after-effects (post-operative vomiting or headache) have been observed.

Seifert: Résumé of Literature Concerning Alypin (Sammelreferat über Alypin). *Würzburg. Abhandl. a. d. Ges.-Geb. d. prakt. Med.*, 1913, xxxiii, Suppl., 1.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Alypin is an improvement on other anæsthetics, according to many authors, because it can be sterilized, because when dissolved it is very durable, and finally because of its non-poisonous action (one half as poisonous as cocaine). A solution of 1-3 per cent of alypin is used as local anæsthetic in urethra and bladder. In one case, according to Garasch, dyspnoea, nausea, vomiting, dizziness, hallucinations and cramps followed an injection of 5 cc. of a 2 per cent solution into urethra. In surgery, used as infiltration anæsthesia with a strength of .5-2 per cent. Krömer injected 5-10 cc. of 1 per cent solution of alypin in the mucosa of the cervix with good results. Alypin is of little value as a spinal anæsthetic because of headache, backache, nausea, vomiting, collapse, dyspnoea, unconsciousness, and retention of urine which follow its injection into the spinal canal. A 10 per cent salve of alypin applied to painful ulcers gives great relief. Alypin is a valuable anæsthetic, for it has so many good characteristics and so few bad ones.

JÄGER.

SURGERY OF THE HEAD AND NECK

HEAD

Tonmeux and Ginesty: Primary Epithelioma of the Submaxillary Glands (Epitheliome primitif de la glande sous-maxillaire). *Bull. et mem. Soc. anat. de Par.*, 1913, xv, 61.
By Journal de Chirurgie.

A man, 59 years old, in excellent general health, noticed a gradually growing tumor in the left submaxillary region. On palpation there was a hard,

painful mass the size of a pigeon's egg which was adherent to the deeper tissues but not to the skin. The lymph glands about it rolled under the fingers. In the absence of any lesion in the mouth or throat the diagnosis of primary carcinoma of the submaxillary gland was made.

At operation a tumor was found which was adherent to the periosteum and muscles. Its removal was accompanied by a thorough curettage of the

region and removal of the tissues and lymph glands involved and of the carotid glands. Two months later the patient returned with a local recurrence involving the maxilla, floor of the mouth and the thyroid body. The incision was reopened but the operation was unsuccessful as was treatment with copper and radio-therapy.

Histological examination showed that the gland was almost entirely replaced by an atypical carcinoma, part of which was glandular and part contained epithelial pearls. There were no pearls in the involved lymph glands.

The authors think this is a primary carcinoma of the gland. The presence of the epithelial pearls is explained by a reversion of the cells of the gland to their primitive type, which is that of the cells of the floor of the mouth from which the gland develops.

P. MASSON.

Coughlin: Partial Operation for Carcinoma Involving the Jaws. *Interst. M. J.*, 1913, xx, 431.

By Surg., Gynec. & Obst.

This paper represents the best type of contribution to practical clinical surgery. Coughlin takes as his thesis the fact that surgeons are, as a rule, content to excise a reasonable amount of soft parts that are the seat of cancer, but that as soon as bone is involved, the operative procedure adopted is usually a mutilating one.

The outlook in carcinoma of the jaws is bad enough, at best, but it is nevertheless not necessary to remove more bone proportionately, than soft parts. Of course, there are cases demanding the removal of a whole jaw, but Coughlin does not feel that it is possible to frame up specific rules for guidance as to when the more and when the less radical operation is to be performed. The results of partial operation for mouth cancer (removal of the growth with a fair margin of normal tissue, followed by actual cauterization) are better than those following the radical operation (removal of a complete segment of, or the entire jaw), but this may be due to the fact that the partial procedures are essentially indicated in the early cases. The disadvantages of the radical operation are increased shock, mutilating deformity, and loss of function. According to the clinical experiences and observations of Coughlin, carcinoma invades bone less rapidly than it invades the soft parts. After all, the crux of the situation lies in making an early diagnosis.

If a patient over forty has a chronic ulcer in or about the mouth, suspect cancer. Remove all possible sources of irritation such as jagged teeth, bad plates, rough or short pipestem, etc., keep the ulcer clean, and either have the Wassermann test made, or give anti-syphilitic treatment until satisfied that it is not luetic. Any ulcer that does not show signs of healing under full doses of potassium iodide and mercury, after three weeks' treatment, is not syphilitic. Then insist on making a section of the edge of the ulcer. Remove a small portion,

securing both healthy and unhealthy tissue, and have the same examined microscopically by a competent pathologist.

M. G. SEELIG.

Kettlewell: Fibroma of the Maxilla. *Proc. Roy. Soc. Med.*, 1913, vi, Odontol., Sect. 53.

By Surg., Gynec. & Obst.

The patient, a dairyman, age 32, came under observation with a large swelling in the mouth. Two years previously an attempt was made to extract what was thought to be the upper right second molar; the tooth was broken and roots remained. A swelling soon formed which was called an abscess. This he was advised to poultice. As the swelling increased in size it was incised but no pus was evacuated. When the author saw the patient he found a foul septic mouth with a firm elastic tumor involving the tuberosity of the second bicuspid and the whole alveolar ridge on the right side. The patient suffered no pain and showed no glandular enlargement.

After scaling the teeth, the right maxilla was removed. The specimen showed a dense growth in the alveolar region with a less dense free growing mass extending into the antrum, which was practically obliterated. Patho-histological section showed a dense fibrous growth of connective tissue.

H. A. POTTS.

Julliard: Sub-dural Intra-cranial Cyst of Traumatic Origin; Jacksonian Epilepsy; Ameliorative Trepanation (Kyste intra-cranien sous-dural d'origine traumatique; épilepsie Jacksonienne; trépanation amélioration). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 334.

By Journal de Chirurgie.

The author reports a case of a serous cyst in the brain of a boy twelve years old. This followed a skull fracture received in infancy. The cyst was located in the Rolandic area and extended down to Broca's region. Following the operation the boy improved, but he had a recurrence of the epileptiform attacks, which were relieved by withdrawing 50 cc. of serous fluid through the operative scar.

Auvray, working for the author, collected seventy-nine cases of intra-cranial cysts of traumatic origin. These he divided into intra-cerebral and meningeal cysts, the latter into extra- and sub-dural cysts. There were thirty-eight cases of intra-cerebral cysts. Whether single or multiple, large or small, whether containing clear or bloody serum or blood, these cysts did not develop rapidly. There is nothing characteristic about their symptomatology. Pathologically, those developing rapidly might be due either to a transformation of the traumatic hemorrhagic exudate or to the formation of real closed cavities in the pia mater or sub-arachnoid spaces due to cicatrices into which fluid is excreted and from which it can not escape. The slow forming cysts are, on the other hand, due to a degeneration in the brain substance following trauma or changes in the brain following hemorrhage into the parenchyma.

There are three methods of treating these cysts: (1) simple puncture, which is insufficient; (2) incision

and evacuation, which, as in the above mentioned case, is apt to be followed by recurrence; (3) extirpation is the method of choice, but is not always applicable, as enucleation often leaves a defect. The operation is very severe and is apt to be followed by hæmorrhage, shock or infection.

J. DUMONT.

Jones: The Value of Mallory's Connective Tissue Stain for the Demonstration of Variation in Thyroid Colloid. *J. Exp. M.*, 1913, xvii, 547.

By Surg., Gynec. & Obst.

Jones has sought a differential stain for thyro-iodine in the thyroid colloid and found Mallory's connective tissue stain to be satisfactory. He found that the stain used in connection with fixation of the tissue by Zenker's fluid or bichloride of mercury demonstrates the iodine content, as evidenced by parallel chemical determinations, iodine feeding acid test tube experiments.

A slight modification of the method described by Mallory and Wright was found to give the best results. This modification consists in omitting the acid fuchsin and staining only with Orange G and anilin-blue. The colloid containing thyro-iodine stains with anilin-blue, and that which does not, stains with Orange G. Both reactions may often be seen in the same alveolus. JAMES F. CHURCHILL.

Karschulin: Stab Wound in the Left Temporal Region of the Brain (In das Gehirn eindringende Stichverletzung der linken Schlafengegend). *Wien. med. Wchnschr.*, 1913, lxviii, 269.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A soldier received a stab wound in the skull, the weapon entering two fingers' breadth over the left external auditory meatus. A movable bone fragment extruded. At first he had no other symptoms except aphasia (alexia and agraphia), but on the seventh day there was a rise in internal pressure, with slow pulse, increase in the aphasia, restlessness, cyanosis, and dizziness.

On making an osteoplastic flap it was found that the wound had penetrated the skull and had caused the formation of a hæmatoma. This was of venous origin, was circumscribed and extended down four centimeters into the brain substance. The lesion was healed and the aphasia cured after seven weeks. There was no noticeable disturbance in his spontaneous speech in repeating formed sentences, in writing both from dictation and from spontaneous thought, as well as in reading aloud.

The aphasia was, therefore, caused by the pressure of the hæmatoma producing a diffuse disturbance of the speech center, without injuring the brain substance itself.

HENSCHEN.

Von Eiselsberg: Brain Surgery (Gehirnchirurgie).

Deutscher chir. Kong., 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The statistics of the one hundred and sixty-two cases operated on in his clinic with the diagnosis of brain tumor are given in detail. In sixty-nine cases

which were diagnosed as cerebral tumors, there were twenty in which the skull was opened and nothing found; seven of these died. In forty cases the cerebral tumor was removed, with nine operative deaths; five from meningitis (in two of these drainage was established and in three the dura was left open). Nine others died of the tumor after a few months, while a few died from a recurrence. Three remained unbenefited on account of diffuse glioma, etc. Nine were cured, six improved. The results were more favorable in tumors of the hypophysis: in sixteen cases there were four deaths and twelve cures or improvements. Among these there were three cases of cyst. He recognizes meningitis serosa only as a symptom, not as a disease *per se*. Of three such cases two were not cured. Nine cases of cerebellar tumor died after the first operation; in twelve nothing was found; and in only eight was the tumor found. In contrast to this, the diagnosis of tumor of the auditory nerve was confirmed in seventeen cases. Two patients died after the first steps in the operation; eleven had tumors larger than an egg, and not less than ten of these died. In the future, to avoid shock in such cases, he will remove the tumors piecemeal and on account of the relative benignity of these tumors he does not fear dissemination from leaving remnants. The operation was given up in a case of tumor of the both auditory nerves, where blindness and deafness were already absolute and where there was no headache. Two cases of ventricle drainage died, in one of which inflammatory changes took place around the drainage tube. In the future the corpus callosum will be punctured. In some cases the presence of cysts was not recognized because the contents were mistaken for cerebro-spinal fluid.

Calcium lactate is given before operation for its favorable effect on blood coagulation and urotropin as a disinfectant for the cerebro-spinal fluid. Novocain-adrenalin is the anæsthetic used in the first step of the operation. Plastic operations on the dura were performed, using the fascia lata in fourteen cases, two of which died. This procedure seemed to decrease the danger of infection. Meningitis was observed seventeen times, four of which followed tumors of the hypophysis operated by the nasal route. Krause, in twice the number of cases, had no infection. This difference was attributed, aside from chance, to contusion, tamponading, drainage, and the condition of the patient. Meningitis did not occur among the private cases. Probably, also, the dressings were changed too seldom. Twenty-nine patients died of shock and paralysis of respiration. This number will probably be decreased with greater experience, more careful control of bleeding; and piecemeal removal of tumors. More important than all these, however, is early diagnosis. Even though the results in operations for brain tumor are much less favorable than in other forms of surgical procedure, the operation with all its dangers seems fully justified when the miserable condition of the patients is considered.

KATZENSTEIN.

Krause: Brain Surgery (Gehirnchirurgie). *Deutscher chir. Kong.*, 1913,

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The results of the operation for cerebral tumors have not been as favorable lately because of the increased number of operations performed. It is, however, indicated in all cases as soon as a suspicion of tumor arises. Tumors of the posterior cranial fossa, those of the cerebellar substance, and even those of the vault of the fourth ventricle, give a fairly good prognosis. His permanent results in cerebellar-pontine tumors were especially bad; in forty cases only four were satisfactory. The tumors were always large and involved the pons and medulla, rendering the diagnosis very easy. As the diagnosis is relatively easy, it is best to obtain these cases for operation in the early stages.

Krause operated hypophyseal tumors according to all of the described methods, once according to that of Hirsch. This method requires special rhinological training and offers no advantages to the surgeon. It is to be preferred to Schloffer's method, as it leaves no disfiguring scars and does not lead to ozæna. He operated seven times according to Schloffer's method, but was able to remove the entire tumor only once. He therefore returned to his own method of operating through the forehead. A patient operated upon by this method four and one-half years ago for a tumor the size of a plum has lost all symptoms of acromegaly, and the menses have returned. This radical method should always be employed in case a suspicion exists that the anterior lobe or any of the neighboring parts of the brain are involved.

The author concludes that meningitis serosa of the cord is a clinical entity, as several cases have been cured for five years. He also has two complete cures of the much rarer serous meningitis of the brain. The incision into the posterior commissure is borne without danger if made in the median line. The author has made this incision several times to locate an intra-medullary disease focus.

VON EISELSBERG, in discussion, said the presence of a serous meningitis of the brain is not the cause of severe disturbances and that the disease is diagnosed much too often. Several observations have taught him that it is not essential to remove the entire tumor in operating for hypophyseal tumors.

KATZENSTEIN.

Walter: The Histological Structure of the Pineal Gland (Über den Histologischen Bau der Zirbeldrüse). *Sitzungsber. u. Abhandl. d. naturforsch. Gesellschaft. zu Rostock*, 1913, v, N. F.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Histological investigations of the pineal gland with a certain gold stain (the details of which are not given) and with the Bielschowsky stain yielded, in contrast to the results obtained with the ordinary staining methods, extraordinarily complicated structures. The septa of the pia and vessels are surrounded with innumerable small button- and

club-like structures, attached to ends of very fine strands, causing a dense network. These fine threads run backwards into thicker threads and finally are lost between the cells of the parenchyma. The author believes they must be nerves and nerve-endings, which they simulate in staining. Almost all parenchyma cells have a number of these strands, the beginnings of which are stained similar to the narrow plasma around the large round nuclei. Alongside these round cells are a few larger cells resembling in part pyramidal cells of the cortex and motor spinal ganglion cells, with abundant plasma, indefinite nuclei and numerous projections. In addition, smaller polymorphous cells with many fine strands are found in the septa, each provided with a club-like end. None of the cells have a distinct axis cylinder; the tigroid substance and the fibrillar structure is missing. The sympathetic character of the cells cannot be discarded without further proof. (Cajal made similar observations on rabbits.)

It is likely that in every case between 9 and 62 years, cells will be found that bear a definite relation to the function of the sympathetic nerves of the pia and choroid plexus, probably being of decisive significance in the formation of the liquor cerebrospinalis.

TÖLKEN.

Dana and Berkeley: The Functions of the Pineal Gland, with Report of Feeding Experiments. *Med. Rec.*, 1913, lxxxiii, 835.

By Surg., Gynec. & Obst.

What is known at present of the pineal gland comes from the following sources: Experiments on animals, experiments with extracts of the gland, clinical and pathological studies, and a consideration of the embryology and phylogeny. The literature of the diseases of the pineal gland gives some evidence that lesions occurring in the young cause peculiar disturbances of nutrition, such as increased growth of adipose tissue, stimulation of the development of the sexual, the somatic, and perhaps the mental functions.

The pineal gland in man has become a glandular organ with secreting cells and probably a few nerve fibers. It tends to undergo deterioration at about the seventh or eighth year but up to that time may be supposed to have some function.

The following experiments were carried out with the glands of young bullocks:

1. The nucleoproteids and entire gland extracts were obtained and injected into the veins to test the effect on the blood pressure.

2. They were also injected into young animals (rabbit and guinea pigs) for a long time to determine the effect on nutrition.

3. The whole gland was fed to defective and retarded children.

Their provisional conclusions are:

1. The pineal gland is the vestigium of the special sense organ of vision in invertebrates and certain low vertebrates. In man it has practically lost all the structural characters of a sense organ and has

those of a glandular body. It undergoes some involution at about the seventh year of life.

2. In the early period of life it has influence over bodily nutrition, including the development of the genital organs, the deposit of subcutaneous fat, general growth and mental progress.

3. Extract of pineal gland of bullocks injected into the veins of dogs has no effect on the blood pressure.

4. The same extracts fed to babies causes an increase in metabolic activity as evidenced by the increase in nitrogen eliminated by the urine.

L. G. DWAN.

Rorschach: Pathology and Operability of Tumors of the Pineal Gland (Zur Pathologie und Operabilität der Tumoren der Zirbeldrüse). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 451.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The patient, a man 26 years old, in whose family psychical and organic brain disease had frequently occurred, presented the following symptom complex: cerebral ataxia, tendency to left-sided staggering, sensitiveness of the skull over the region of the left lobe of the cerebellum, left glosso-pharyngeal paresis, amblyopia and choked disc, alternating brain-pressure phenomena, considerable adipose development and inguinal cryptorchism. The probable diagnosis was tumor of the cerebellum in the neighborhood of the foramen Magendi. The symptoms of dementia præcox improved with an increase in the tumor symptoms. After an osteoplastic flap had been made over posterior part of the skull, the patient died. At autopsy, a tumor of the pineal gland was found, involving the greater part of the third ventricle, covering the region of the aqueduct and flattening the anterior corpora quadrigemina. The histological diagnosis was gliosarcoma gangliocellulare.

Forty-seven cases of pineal gland tumors, mostly sarcomata, cystomata and teratomata are described in the literature. The male sex between the ages of 10 and 20 years is decidedly predisposed. The size of the tumor varies from a hazelnut to that of a kidney. A characteristic topical syndrome cannot be set down. The symptoms of tumor of the corpora quadrigemina are important; in this case they were only partially present. Adipositas and dysgenitalism are frequent as well as cerebellar ataxia and aural disturbances. Bradycardia may be absent as the tumors more commonly grow toward the third ventricle and do not involve the vagus center. Of diagnostic significance, perhaps, are the fairly regular and periodic remissions and exacerbations of the general symptoms. Tumor and psychosis are independently due to a faulty development of the "anlage." The local disposition of the pineal gland region is, according to Marburg, characterized by the fact that it coincided with the glia connective tissue zone of the posterior roots and because tissues of various types coalesce.

Pineal gland tumors may be attacked in two ways,

according to experiments of Brunner on the cadaver. The first way is from above, the bony flap penetrating downward between falx cerebri and hemisphere; liberation of posterior part of the corpus callosum, perforation of the same and continuing downward to the region of the corpora quadrigemina. The second method consists in entering between cerebellum and hemisphere along the tentorium cerebelli. A perforation of the corpus callosum need not result in any apractic disturbances as other centers act vicariously.

KLOSE.

NECK

Trautmann: Tuberculosis of the Lymph Glands of the Neck and its Relation to the Tonsils and the Lung (Über Halslymphdrüsentuberkulose in ihrer Beziehung zu den Tonsillen und zur Lunge). *München med. Wchnschr.*, 1913, lx, 866.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Orth proved experimentally the existence of primary tuberculosis of the tonsil. This discovery called forth a series of contributions which designated the tonsils as the portals of entrance for tubercle bacilli with tuberculosis of the lung following, analogous to other diseases of tonsillar origin. The theory that the infection was transmitted through the lymph passages was disproved by Most by anatomical research which showed that there were no lymph vessels passing from the neck glands to the lungs. On the other hand, according to Most, tuberculosis of the lymph glands of the neck owes its origin to a focus of infection in Waldeyer's lymphatic tracheal ring, and chiefly in the palatine tonsil. The practical importance of this fact is illustrated by the following case:

A large tubercular abscess in the glands of the left side of the neck was opened in an eleven-year-old girl with healthy lungs. A fistula remained. At a later operation a pocket of deep-seated caseous glands was removed. A day later the apparently healthy left tonsil was removed. On microscopic examination it showed typical epithelioid tubercle cells and Langhans' giant cells. The author draws the important conclusion that in cases of tuberculosis of the neck glands, in addition to their removal, the corresponding tonsil should be completely extirpated in order to avoid the constant dissemination of the primary tuberculous focus to new glands through the lymph passages.

HARF.

Küttner: A Case of Hyomandibular Fistula (Die Hyomandibularfistel, eine neue Form der angeborenen Halsfistel). *Deutsche med. Wchnschr.*, 1913, xxxix, 489.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author cites a case of congenital lateral fistula of the neck, communicating with the canal of the ear, a malformation about which nothing analogous can be found in the literature. The case is that of a girl, eight years old, with a persistent fistula of the neck which was located at first in the lower part of

the lower jaw, midway between the chin and the angle of the jaw, but which in the course of the years moved more and more upwards in the direction of the ear. The fistula was continually discharging. Now and then, a homogeneous fluid discharged from the right ear. At the operation, which consisted in excision of the entire fistulous tract, it appeared that the fistula opened into the external meatus.

According to the opinion of Klaatsch, the origin of the congenital fistula of the ear is to be traced back to an arrested development or malformation in the region of the first branchial cleft, the fistula taking its origin from a remnant persisting in the region of the hyomandibular cleft. Microscopic examination of serial sections confirmed the diagnosis of "hyomandibular fistula" made macroscopically by Klaatsch.

VALENTIN.

Marine: The Evolution of the Thyroid Gland.

Bull. Johns Hopkins Hosp., 1913, xxiv, 135.

By Surg., Gynec. & Obst.

The thyroid, while it does not play an essential rôle in our conception of vertebrates, is, nevertheless, one of their most constant and characteristic structures—existing in the same anatomical form from the adult cyclostomes throughout all the fishes, amphibians, reptiles, birds and mammals. Marine shows that morphologically the endostyles are fundamentally identical in all. Cyclostomes, fishes, amphibians, reptiles, birds and mammals are the only classes of animals which possess ductless thyroids, the follicles of which are anatomically identical in all. The most important of the epithelia concerned in the formation of the ductless follicles is that form which is continuous with the lining epithelium of the duct and pharyngeal grooves. Studies in the embryology of the ductless thyroid have shown that, in fishes, amphibians, reptiles and birds, the thyroid arises solely from a median, single, ventral downgrowth of the pharyngeal endoderm in or slightly anterior to the first aortic arch. In mammals this symmetry of development was believed to be departed from through the discovery by Stieda of the so-called "lateral thyroid anlagen" from the fourth or, more accurately in man, the rudimentary fifth gill pouch, but the work in the embryology, in the pathology and in the developmental defects of the thyroid during recent years has shown that these lateral bodies which in mammals only become imbedded in the lateral thyroid lobes take no part in the formation of thyroid gland tissue. This solution of the origin of the mammalian thyroid from the single median anlage harmonizes the location and development of the endostyle with the location and development of the ductless thyroid. The thyroid mechanism, therefore, irrespective of the possible phylogenetic relationship to the chordate stem of the several classes of animals concerned, appears to have been evolved through a direct line of descent from the tunicates through the amphioxus, fishes, amphibians, reptiles, birds and mammals. The meager evidence of

the physiology in both the endostyle and the ductless thyroid gives no suggestion of an inter-relationship or function. Primarily the thyroid is a part of the alimentary tract and in its endostylar form is a digestive gland of great importance through its probable external secretion. In its ductless form it is only the atrophic remnant of its ancestor which, while it has suffered a corresponding distortion of function, still profoundly influences the animal's nutrition through the effect of its probable internal secretion.

GEORGE E. BEILBY.

Favre and Savy: Syphilis of the Thyroid; Its Histological Analogies with Tuberculosis

(Syphilis thyroïdienne; ses analogies histologiques avec la tuberculose). *Lyon chir.*, 1913, ix, 511.

By Journal de Chirurgie.

The authors report the result of a complete histological examination of the portion of the thyroid removed at operation in the case recently reported of Poncet and Leriche. Macroscopically the lobe which was removed contained about a dozen crude gummas. They varied in size from a grain of wheat to a nut; their yellow color stood out distinctly on the sclerotic glandular parenchyma.

Microscopically the interstitial tissue was greatly infiltrated with round cells (connective tissue and lymphocytic type), with here and there new-formed capillaries and slightly involved arterioles. At other points this inflammatory infiltration was replaced by large sclerotic bands which crowded out the glandular elements. The thyroid vesicles had completely disappeared at certain points; elsewhere they persisted, but their cells were swollen and increased in number, and had invaded the lumen, pushing back the colloid substance, which finally disappeared. The more extensive gummas appeared like extensive necrotic, amorphous, poorly stained areas in the center of which scarcely any thyroid elements could be recognized. In the younger gummas small islets of necrosis were seen separated by areas of round-cell infiltration.

The most interesting point disclosed in these sections was the following: In certain places the inflammatory infiltration was no longer diffuse, but constituted small nodular formations at the center of which the cells had taken on an epithelioid character, and in which clearly characterized and rather numerous giant cells were present. The origin of these nodules and giant cells was clearly from the interstitial tissues and not from the thyroid vesicles from which they were always separated.

The importance of this observation is stated in the conclusions drawn by the author: That tuberculosis and syphilis of the thyroid may not always be capable of microscopic differentiation and since both may give rise clinically to a similar picture of ligneous thyroiditis it is quite possible that, in the past, cases of so-called tuberculosis of the thyroid have in reality been syphilitic. Differentiation by discovery of the bacillus of Koch or of the spirochæte in the section is not practicable since neither are

usually found. The Wassermann reaction and the results of antiluetic treatment must be called upon to settle the question.

CH. LENORMANT.

Tietze: Is Bilateral Resection or Unilateral Extirpation of the Thyroid Preferable (Beidseitiges Resektion oder einseitige Exstirpation des Kropfes)? *Berl. klin. Wchschr.*, 1913, 1, 99.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author, in opposition to Kausch, prefers unilateral extirpation of the thyroid because the post-operative course is decidedly milder and shorter. After the bilateral wedge-shaped excision by the Mikulicz method, generally unpleasant symptoms of hyperthyroidism appear, such as high temperature and rapid pulse, because of necrobiosis of the re-

maining parenchyma in consequence of ligature of the vesicle, which cannot be accurately limited. The healing of the wound is slower, and longer accompanied by a discharge of secretion and sutures through the drain. In the unilateral extirpation (even under local anæsthesia) there is a much slighter degree of increase in temperature and pulse rate. He explains this as being due to the slighter amount of tracheitis and laryngitis, what is partly by serous infiltration of the region of the wound and difficult expectoration and partly to disturbance of circulation in the mucous membrane of the larynx because of ligature of the superior thyroid. He reserves resection—that is, wedge-shaped incision from both halves of the thyroid—for cases of diffuse bilateral goiter.

BIERNATH.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Guleke: Penetrating Combined Thoracic and Abdominal Wounds (Penetrierende Brust-Bauchwunden). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In contradistinction to abdominal injuries, a slow strong pulse due to vagus irritation is present in combined thoracic and abdominal injuries. Other symptoms also characteristic of abdominal injuries are frequently absent in combined injuries. Although expectant treatment can be employed in thoracic injuries, the indication in combined injuries is to proceed actively lest the prognosis become unfavorable. The author advises the transpleural route, as it is easier to suture the diaphragm from the pleural side than from the abdominal. In four severe injuries the author performed a thoracotomy in two, and in two a simple laparotomy. One case was a gunshot wound of the heart and spleen. The patient recovered. In the second case peritonitis resulted from a stab wound with a wooden foil, which entered the seventh left intercostal space and perforated the stomach transversely. In spite of the interference the patient died of peritonitis.

KATZENSTEIN.

Crookshank and Boyd: Case of Congenital Thoracic Deformity. *Proc. Roy. Soc. Med.*, 1913, vi, Sect. Dis. Children, 152.

By Surg., Gynec. & Obst.

The deformity consisted of a large depression in the upper part of the chest and the gap in the parietal wall, which is apparently due to the absence of the outer portion of the second, third and fourth ribs. The sternum is asymmetrical and the right upper costal cartilages are bent backward, with marked hernia of the right lung. The deformed area is found to be almost exactly covered by the upper arm.

C. G. GRULEE.

Park: The Thymus and Other Ductless Glands. *Cleveland M. J.*, 1913, xii, 329.

By Surg., Gynec. & Obst.

The thymus is described more fully by the author than the rest of the glands of internal secretion. This gland is found distributed through all except the very lowest vertebrates. Ontogenetically it appears to be an offshoot of the same embryonic stalk from which the thyroid is produced. Normally only the remnants of the thymus can be found by the time the child is thirty months old.

The relation of the thymus to bone development has only recently been emphasized. Whereas the pituitary body undoubtedly has a profound influence upon bone development in the more mature years or even in adolescence, the thymus seems to influence greatly the same process in the very early years. The condition which is very frequently diagnosed as rachitis is many times a case of disturbed thymus secretion. Acondroplasia, dwarfing, nainism and the like must all be ascribed to the thymus.

Experimental evidence is not lacking in proving the connection between the thymus and the early development of bone. Klose and his associates found the animals upon which a thymectomy had been performed showed tardy development and the epiphyseal cartilages in whole or in part would fail to ossify. The bones, moreover, are lacking in mineral elements and are so soft that they can be cut with scissors. Later the flexibility gives way to friability and the bones become extremely brittle.

As to exactly how many of the diseases of the bones and joints are due to thymus disturbances it is impossible at the present writing to say, but there is strong evidence that many of them are caused by disturbances of internal secretion. Among these diseases are osteomalacia, rheumatoid arthritis, hypertrophic osteoarthritis, osteitis deformans, and possibly the arthropathies of tabes. J. H. SKILES.

Wyckoff: Röntgen Ray Treatment of Thymus Hypertrophy. *Cleveland M. J.*, 1913, xii, 341.
By Surg., Gynec. & Obst.

The author here reports two cases so treated, one successfully, and one much improved but still under treatment.

He also discusses status lymphaticus and theories of thymic asthma and death.

According to the author, involution leading to complete destruction of the thymus parenchyma begins within three or four hours after the exposure to X-rays, with consequent lessening of symptoms.

As the involution continues after the exposure it is advisable to drop the treatment, even before the entire disappearance of symptoms; the severity of symptoms must regulate the number of exposures. A short, strong exposure of five to eight minutes will accomplish the same results and without danger as fifteen to twenty minutes of weak exposure.

Not only does relief from symptoms follow, but there is a marked improvement in the general condition of the child.

H. A. POTTS.

TRACHEA AND LUNGS

Broeckaert: Operations for Tracheal Tumors (Quelques interventions pour tumeurs de la trachée). *Ann. Soc. belge de Chir.*, 1913, xxi, 38.
By Journal de Chirurgie.

In 20 years Broeckaert has operated only five times for tumors of the trachea. The first case was that of a small child on whom tracheotomy had been performed for croup. Several weeks after the removal of the canula respiratory difficulty developed and he performed an exploratory laryngo-tracheotomy. A large fleshy growth had developed upon the inner margins of the old tracheal wound. After complete ablation he sutured the larynx and trachea and obtained a permanent and rapid cure. Histological examination showed the new growth to be a simple granuloma. Stenosis by such exuberant granulations is not very rare.

In the second case, the stenosis was due to papillomas of the trachea and larynx. Immediate tracheotomy with an extended laryngo-tracheal incision was performed, so as to permit of a complete removal of the numerous papillomatous vegetations which completely filled the upper portion of the trachea and larynx. The author then did a laryngo-tracheostomy by suturing the mucous membrane to the skin on either side, thus allowing him to observe the larynx and the trachea for the appearance of recurrences. Several times it was necessary to remove new tumors and a few months later he closed the opening permanently.

Broeckaert has had two cases of malignant tumors of the trachea; one primary and the other secondary due to an extension of a carcinoma of the thyroid. In both cases there was such an extensive infiltration of the trachea that radical operation was impossible. In one the author performed a tracheotomy with partial ablation of the tumor mass. In the other,

a tracheotomy was done and followed by the introduction of a long flexible tracheal canula as an emergency measure. Statistics show that the results of operation for malignant tumors of the trachea in general are not encouraging. Only two cases are known where the trachea was successfully resected for a malignant tumor: that of Bruns, and the more recent one of Schmiegelow.

The last case was that of a man, 32 years of age, who complained of several attacks of suffocation occurring in the preceding few weeks. Laryngoscopic examination, in November, 1912, disclosed slight redness of the vocal cords and beneath these a rounded, rather voluminous tumor, which appeared to arise from the posterior wall of the trachea. It was of a pale rose color, perfectly smooth and jutted forward into the lumen of the trachea. A crico-tracheotomy revealed the tumor attached by a broad base to the posterior tracheal wall and encroaching upon the cricoid. It was the size of a large hazelnut. It was removed without difficulty in several portions, after which the point of attachment was carefully curetted. The margins of the cricoid and the trachea were approximated by catgut suture and the skin incision closed by means of Michel's forceps. The canula was left in place. Post-operative sequelæ were normal and after being convinced that all trace of the tumor had disappeared, and that the movement of the vocal cords was normal, the canula was removed at the end of the third day. Two months after operation there had been no signs of recurrence. Histological examination of the tumor showed it was a lobulated fibroma. J. DUMONT.

Schumacher: The Operative Treatment of Lung Embolism (Beiträge zur operativen Behandlung der Lungenembolie). *Deutscher chir. Kong.*, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of three lung embolism cases operated according to Tredelenburg by Sauerbruch and Schumacher at the Zurich Clinic and several observed fatal cases of lung embolism, Schumacher discusses the symptomatology and diagnosis of large pulmonary emboli and the indications and technique of the Tredelenburg operation. He emphasizes the difficulty, and even impossibility, of differentiating between pulmonary embolism and certain rapidly fatal cases of cardiac origin, especially myocarditis. He differentiates three forms of death in pulmonary embolism: (1) the almost instant death from shock; (2) the very rapidly resulting death in large emboli obstructing both branches of the pulmonary artery; (3) the death occurring many minutes, even hours, after a protracted case of embolism.

In so far as operative indications are concerned, the author believes that in the rapidly progressing cases one's duty lies in attempting interference, as recovery may occur in some one case. In these cases the anatomic relations are also favorable for the extraction of an embolism. In the protracted cases, one is justified in resorting to operative interference when, in spite of stimulation, aggravation of

the conditions occurs. He observed in two cases the appearance of a clicking pulmonary râle, which gradually disappeared as the heart weakened. Perhaps this disappearance of the râle is an indication not to delay the operation any longer.

Friedrich: The Effect of Extensive Resection of the Thoracic Wall on Marked Pulmonary Emphysema (Rückwirkung einer ausgedehnten Brustwandresektion auf hochgradiges Lungenemphysem). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Friedrich discusses the remarkable retrogression which occurred in a case of marked pulmonary emphysema after an extensive resection of the thoracic wall.

The patient was a Russian coachman, fifty-four years old, suffering from a high-grade pulmonary emphysema with a barrel chest. He was admitted to the clinic on account of a periosteal sarcoma extending from the right second intercostal space to the right sixth rib. The tumor was a large, circumscribed, hard mass. The X-ray picture showed no pulmonary metastases but numerous calcified bronchial glands. The chest wall was opened under local anæsthesia and under a difference in pressure, and the entire tumor area was resected. The resulting defect included a 12 cm. long resection of the third, fourth, fifth, and sixth right ribs, an area about 120 to 150 sq. cm. The tumor had bulged the parietal pleura inward. A narrow band of adhesions led to the moving lung. At the pulmonary end of this band several metastases were found in the lung. The lung was brought forward and otherwise found free from metastases. The metastatic focus was removed, and the lung sutured. The skin flap was closed tightly, and the air was forced out of the thorax. A dressing was rapidly applied but a definite pneumonia set in in the operated portion of the lung. Otherwise there was complete primary union.

During the following weeks a distinct improvement in the emphysema manifested itself. This, of course, may have been a coincidence. Friedrich, however, with all due conservatism, assumed that on account of the extensive defect, in which the inspiratory and expiratory excursion of the lung could be followed closely, an effect was produced such as occurs in Freund's method of resection or division of the ribs, permitting greater mobility of a large area of the lung with improvement in its circulation. The entire result would be in harmony with the theory developed by Freund to explain the operative results obtained in emphysema of the thorax.

PHARYNX AND OESOPHAGUS

Liebault: Chronic Inflammatory Stenosis of the Cardiac Region of the Oesophagus (Les sténoses inflammatoires chroniques de la région cardiaque de l'oesophage). *Thèse de doct.*, Par., 1913.

By Journal de Chirurgie.

The author holds views on the etiology of the so-called idiopathic spasms of the oesophagus which are

quite at variance with those usually accepted. While certain cases may still be considered idiopathic, the greater number of primary oesophageal spasms have, according to the author, a very definite etiology.

The first step in the mechanism, he considers to be the formation of an erosion in the cardiac (more exactly diaphragmatic) portion of the oesophagus. Numerous factors may lead to the formation of this erosion, notably alcoholism, excessive use of tobacco, too highly seasoned food, gulping of large pieces of food, oesophageal varices, etc. The erosion once formed leads by a reflex path to oesophageal spasms, which in turn prevent the healing of the erosion,—processes entirely anomalous to those observed in anal fissure; and, as in this case, the erosion may be so small as easily to escape observation during oesophagoscopy.

Biopsies obtained during oesophagoscopy are cited as yielding anatomical details of these erosions. They are inflammatory lesions of the mucosa and submucosa, easily distinguishable from cancerous processes. The old methods of investigation of these cases, that is, auscultation and catheterization, are now supplemented by the X-ray and the oesophagoscope. Radiography may lead to a mistaken diagnosis of oesophageal stenosis unless one remembers that in normal subjects the bismuth may remain stationery for some time in the diaphragmatic region. The oesophagoscope shows the local lesions in the cardiac region. One of three stages may be present: irritation, ulceration, or granulation; sometimes, also, cicatrices may be seen. The course of the affection is very slow; it lasts months or years and affects the general condition of the patient only by the difficulty that it interposes to alimentation. The prognosis is not very serious. When such an inflammatory stenosis is in the stage of granulation, it may, macroscopically, closely resemble a cancerous process. Biopsies obtained through the oesophagoscope are decisive.

Therapeutically, Liebault advises gastrostomy, which allows the nourishment of the patient and procures functional rest for the oesophagus; later the various methods of oesophageal dilatation may be employed.

AMEUTI LE.

Meyer: The Surgical Treatment of Cancer of the Oesophagus. *Med. Rec.*, 1913, lxxxiii, 888.

By Surg., Gynec. & Obst.

The first question that arises in the mind of every physician is, What results have surgeons to show us to-day? Have they saved any patient by resection of the oesophagus for carcinoma? The surgeon may rightly turn around and ask, Can the physician give such a patient any hope whatever? The fact is, that with medical treatment the mortality must be 100 per cent. On the other hand, amongst the fifty and more cases of intrathoracic resection two patients have lived 14 and 17 days, and the cause of death in these cases was lung complication. The author considers the subject from a broader point

of view and discusses briefly the division of responsibility between family physician and surgeon in the task of saving the life of patients afflicted with cancer of the œsophagus. He contends that the disease is absolutely an operative one and should be turned over to the surgeon as soon as the diagnosis has been made. The reasons for this statement are:

1. The comparative benignancy of the trouble, clinically.

2. The bright outlook after operative treatment in early cases.

3. Up to the present time no surgeon has had a chance to operate on a case under really favorable circumstances.

The author mentions briefly the method of making the diagnosis in cancer of the œsophagus, emphasizing the necessity of an early diagnosis, and then discusses the latest improvements in œsophagoplasty, especially with reference to Jianu's new operation in which a part of the major curvature of the stomach is dissected and formed into a long gut-like tube. It serves simultaneously as a gastros-

tomy and inferior œsophagoplasty. He believes it best to place the tube subcutaneously. A further point he emphasizes is, that no further efforts should be made to secure air- and water-tight the upper stump of the resected œsophagus which was formerly left within the thorax. It should, in every instance, be transposed extrathoracically from above downward in the direction of the Jianu tube. If it is long enough, both ends can be united by suture and therewith the œsophagoplasty completed. If too short, a skin plasty must bridge the defect.

In conclusion he once more dwells on the fact that patients complaining of difficulty in deglutition must not be treated expectantly. Two successful cases of œsophageal resection for carcinoma are cited, the first by Zaaier, who reported a successful case of carcinoma of the lower portion of the œsophagus and cardia; the second by Torek, who succeeded in curing a patient with cancer of the œsophagus situated behind the aortic arch. Both cases were operated upon in the early stage, at a time when both pneumogastrics could still be dissected off.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Marien: An Oblique Transverse Incision for Operations on the Gall-Bladder and Bile Ducts (Incision oblique transversale dans les opérations sur la vésicule et les voies biliaires). *Union méd. du Canada*, Montreal, 1913, xlii, 7.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author recommends the laparotomy incision on account of its simplicity, because it offers good exposure of the field of operation, and because the soft parts are not injured. The incision commences at the right costal arch between the eighth and ninth ribs and runs obliquely to the umbilicus and if necessary can be carried downward in the median line. After cutting through the skin, external oblique and anterior sheath of the rectus, he enters the abdominal cavity at the level of the inscriptio tendinea between the two muscles either with a sound or with the fingers and separates them bluntly in a vertical direction. The size of the incision in the posterior sheath and peritoneum depends on the amount of room necessary to perform the operation. The incision permits a thorough inspection of the liver, gall-bladder and bile passages, pylorus and neighboring parts of the stomach, the head of the pancreas, and the right kidney.

NEUFERT.

Enderlen: The Subject of Peritonitis (Gesichtspunkte und Thesen zur Peritonitisfrage). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 593.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

At the Bavarian Surgical Congress the consensus of opinion in regard to the therapy of peritonitis was that it is not advisable to wait for the development of classical symptoms, but to remove rapidly the

source of the peritonitis under a general narcosis. Drainage, especially toward the pouch of Douglas, moderate tamponade, and wide-open wound are the essentials. Irrigation should be employed only in diffuse peritonitis complicated by a flooding of the cavity with bowel contents, and then with eventration. For the after-treatment are advised the exaggerated Fowler position, rectal or intravenous sodium chloride infusions, and camphor. The introduction of sugar and camphorated oil into the peritoneal cavity is of questionable merit. Horz.

Whitelocke: Two Successful Cases of Operation for Strangulated Inguinal Hernia in Female Infants, of the Ages of 22 and 17 Days. *Proc. Roy. Soc. Med.*, 1913, vi, Sect. Dis. Children, 190.

By Surg., Gynec. & Obst.

These cases are exceptionally interesting. The points of interest can be summed up as follows:

1. The early ages at which strangulation occurred, and with apparently no definite cause.

2. The unusual nature of the hernial contents in the one case an ovary and tube as well as small intestine; in the other, an unduly mobile cæcum with large appendix measuring $3\frac{1}{2}$ inches.

3. The successful issue in each case even after the obstruction and symptoms of strangulation had lasted for over three days.

4. The absence of post-operative shock after a general anæsthetic and herniotomy, and in the younger infant after appendectomy in addition.

Herniotomy for strangulation in such young infants must be exceptional, and a successful appendectomy at the age of seventeen days is certainly so.

C. G. GRULEE.

Santini: A New Plastic Aponeurotic Method for the Cure of Direct Inguinal Hernia (Nuovo metodo di plastica aponevrotica per la cura delle ernie inguinali dirette). *Bull. d. sc. med. di Bologna*, 1913, lxxxiv, 201.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author employs, as a radical operation for the cure of direct inguinal hernia, the following method, designed especially for the purpose of re-inforcing the posterior wall of the canal. The various steps are given:

1. Incision is made from the spina anterior superior of the ileum to the pubis.
2. The aponeurosis of the external oblique between both rings is severed.
3. The cord is lifted up, the fascia transversalis is opened, the sac dissected, opened, tied off and removed.
4. An oval flap in the form of a pedicle is made of that portion of the external oblique muscle which lies above the divided portion of the muscle. The pedicle of the flap lies alongside the incision of the divided aponeurosis.
5. The flap is turned downward onto the floor and sutured to one transversalis fascia with silk.
6. The conjoined tendon and Poupart's ligament are then sutured according to Bassini.
7. The cord is replaced and the skin closed.

The author has successfully operated two cases of direct inguinal hernia by this method. HERHOLD.

Prutz and Monnier: Surgical Diseases and Injuries of the Mesentery and the Omentum (Die chirurgischen Krankheiten und die Verletzungen des Darmgekröses und der Netze). *Deutsche Chir.*, Liefg. 46k. Stuttgart: Enke, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Prutz's chapter on developmental history is founded on the views of Toldt. The most important developmental procedures are the twisting of the loop of the umbilicus and the intersecting of the upper attachment of this loop over the large gut. The median dorsal mesentery, according to Prutz, divides into three parts. The lesser omentum is formed from the ventral mesentery.

Regarding the etiology of hernia duodenojejunalis, sinistra et. dextra. and of hernia intersigmoidea, Prutz's theories differ in some respects from those of Treitz. The predisposition to hernial formations to the left of the umbilical loop is caused by the rising of the mesocolon descendens, which may lead to the formation of a fold on its anterior superior surface. According to Prutz, this fold is formed simultaneously with a secondary fold, by the shifting of the peritoneum against underlying structures, thus producing peritoneal folds of the type of the "fossa duodeno-jejunalis Treitz."

To the question of the relationship of this fold to the vena mesent. infer. the author replies that he recognizes no definite connection between the vein and the fold. Surgically, the author claims, the most significant deviations from the normal location

depend upon insufficient secondary fixation of the different segments of mesentery to the posterior abdominal wall.

The author states that the only hernia of the omentum are the hernia foramen Winslow and the hernia bursæ-omentalis. The diagnosis of these hernia, like all internal hernia, was never definitely made before the operation. The differential diagnosis between the hernia duodenojejunalis Winslow and the hernia duodenojejunalis of the right and left side is very instructive. The chief difference is that, in the former, there is generally no hernial sac visible and both large and small intestines are involved, while in the latter there is a sac which contains gut and only the small intestine is involved.

The openings and fissures of the mesentery, according to the author, are either of congenital or traumatic origin. In the former case, they are most frequently found near the lowest part of the ileum. In the latter case, they follow subcutaneous abdominal contusions, or operations such as gastroenterostomy, resection of intestines, etc. As of special interest, the author points to the connection between the chronic ulcer ventriculi and the openings of the mesocolon transversum. The openings that appear at the same time in the lesser omentum are due to gradual rarefaction cancer by the continuous traction exerted by the intestinal loops. The author reports cases of openings in one or both locations without the presence of gastric ulcers. The most frequent cause of these openings is the gradual atrophy of the tissues. The mechanical processes that, according to the author, tend to attenuate or compress the mesentery are pressure and a slinging or tossing motion. These injuries are often secondary, the gut being the main point of attack. The author then discusses the various kinds of forces that cause these injuries, influences of anatomical and functional nature, the different kinds of wounds of the mesentery, especially those resulting from penetrating injuries of the abdominal walls.

Then follows a review of animal experimentation, etiology, symptomatology, diagnosis and prognosis of injuries. "Hæmorrhage, with its local and general signs, constitutes the only early symptom of mechanical injuries. The positive diagnosis of isolated injuries is impossible." The author states that therapeutic principles demand unconditionally operative interference. While the prognosis is nearly always grave in cases left for spontaneous recovery, the prognosis in the prompt operative cases is very good. In the operative cases the author also mentions the attempts at replacing injured mesentery by omentum. Such transplantations of omentum should not be done in lieu of resections of the intestines, but in emergencies they are of great aid. The isolated injuries to vessels within the range of the radix mesenterii are all due to penetrating wounds and affect the vena mesenterii super. exclusively. The author states that it is not permissible to ligate the trunk of these vessels.

After a discussion of omental injuries the author dwells upon the traumatic cysts of the omentum. Of the inflammatory diseases, the author mentions the acute suppurative infections first. The diffuse suppurative inflammations predominate in this class of cases. Locally, thrombophlebitis and lymphangitis play an important part. The author emphasizes the fact that in perityphlitis propagation of the infection generally occurs via the venous radicles of the mesentery, and in typhoid fever via the lymph channels of the mesentery. The critical location of all suppurative processes is the ileo-cæcal region. When chills indicate a continuance of the infection after an early operation for appendicitis, the author recommends, as does Wilms, the ligation of the veins. To do this, begin at the outer border of the colon ascendens, cut through between the cæcum and ileum, and carefully isolate the arteries before ligating the veins. Chronic inflammations of the mesentery follow prolonged mechanical and chemical irritations, e. g., in cases of obstipation (chronic mesosigmoiditis). Chemical irritations, i. e., intoxications, are due to changes going on within the gall-bladder, according to the author's belief. The author differentiates between peritonitis chronica mesenterialis and mesenteritis chronica, according to the origin of the inflammatory process. To understand the inflammatory swellings of the omentum (so thoroughly described by Braun) which occur after herniotomies, the cause should be studied, viz., infection, tumor and chronic course. The author suggests for this condition, the term: epiploitis infection a purul. chron. "Direct inoculation is the etiologic factor in cases that develop an operative epiploitis as a sequel to ligations of the omentum, and contact infection, if it follows intra-abdominal suppuration. The latter is the result of inflammatory adhesions of the omentum to the site of the suppurative process and sometimes is of a transitory nature." The treatment of tumors having a favorable prognosis should be conservative according to Prutz.

Tuberculosis affecting the central layer of the mesentery is found in the lymph glands, the atrium of the infection being in the intestine. The intestinal mucosa is not always tuberculous in such instances. A simple laparotomy, as in peritoneal tuberculosis, is recommended as a therapeutic attempt by the author. Actinomycosis of the mesentery has not been found, syphilis very rarely; but actinomycosis of the omentum was relatively frequent, owing to invasions from the intestines. In cases exhibiting omental tuberculosis, there is a general, extensive tubercular process affecting other intra-abdominal organs. "The real domain of the tuberculosis affecting the omentum, is the tuberculous peritoneum." Prutz classifies torsions of the omentum as those with and those without herniæ. The essential importance of these herniæ is the structural changes brought about when the omentum is found in the hernial contents. Chronic peritoneal processes also cause such omental alterations. The

omentum becomes lumpy. The author does not agree with Payr and his experimentally proved "hæmodynamic" theory, according to which the engorgement of the veins causes the omentum to become twisted. Prutz states that the veins are engorged because they become twisted in common with the omentum. Both observers agree that mechanical influences are operative in these cases, especially the movements of the abdominal parietes. Clinically, Prutz believes that in most cases when a right-sided hernia of the groin suddenly becomes irreducible or incarcerated, it is a sign of an existing omental torsion. "The incarceration in such cases with hernia, and the *appendicitis* in the cases of omental torsion without hernia, are the most prominent symptoms, hence are also most emphasized in the diagnosis."

Aneurisms in the region of the three large arteries leading from the median dorsal mesentery to the alimentary canal (cæliac axis) are very infrequent. Aneurisms in this area would be types of the mycembolic aneurysms of Eppinger. These tumors grow spasmodically and generally hæmorrhage is their fatal termination. Embolism and thrombosis in this location are discussed and also the operative prognosis. Sprengel's theory, claiming a simultaneous closure of arteries and veins in anæmic infarcts as being interdependent, is not in accord with the views of the author. The diagnosis is very difficult; the rapid pulse suddenly appearing as emphasized by Matthes, is also diagnostic of other acute abdominal diseases. Even a previous bloody stool (perhaps a very slight hæmorrhage occurring once only) may be difficult to establish as of diagnostic importance.

The cysts of the mesentery are classified by Monnier according to the anatomic condition of their walls and according to their genesis and not according to their contents, as cysts of lymphatic origin (lymphangiomas, chylangiomas); hæmatocèles whose contents become bloody as a secondary process; echinococcus cysts; enterocèles; dermoid cysts and cysts of separated sperms of the urogenital tract. The solid tumors of the mesentery, Monnier divides into lipomas, fibromas, sarcomas, and carcinomas. Cysts are most frequent in the ileal region, their constant symptoms being compression of the intestines and of the blood vessels. Therapeutically, it is a question of marsupialization and enucleation. Sarcomas arise either from subserous connective tissue, or from lymph glands; carcinomas from the endothelium of the lymph glands and the lymphatics (endothelial carcinoma). Cysts and tumors of the omentum are similar to those of the mesentery. Monnier divides them into cysts of lymphatic and traumatic origin, echinococcus cysts and dermoid cysts, lipomas, fibromas, sarcomas, and carcinomas. Anyone desiring special information in regard to the surgery of the mesentery and omentum will find the work of Prutz and Monnier a mine of dependable information.

GEBELE.

GASTRO-INTESTINAL TRACT

Lyle: Combined Tuberculosis and Carcinoma of the Stomach, with a Report of a Case upon Which a Partial Gastrectomy Was Performed. *Am. J. M. Sc.*, 1913, cxlv, 691.

By Surg., Gynec. & Obst.

That cancer and tuberculosis may be co-existent was pointed out by Bayle in 1810. In 1830, Rokitsky opposed this theory, but in the past few years it has been proven by many pathologists that the double lesion does occur. Oertel showed that enlarged lymphatic glands in the neighborhood of a malignant carcinoma may be tuberculous and show no evidence of malignancy.

The author reports six cases, one being his own. The patient was suspicious of tuberculosis, a brother and a sister having died of pulmonary tuberculosis. The patient himself having had lues was operated upon for stricture in another four years previously. Palpation revealed a walnut-size mass in the epigastric region; this, together with a history of loss of weight, signs of stricture, etc., warranted a diagnosis of carcinomatous stricture of the pylorus with dilatation. Partial gastrectomy confirmed the clinical diagnosis. Microscopical examination of the specimen revealed diffuse carcinoma of the stomach with tuberculosis of the submucosa.

The patient was discharged as cured after 25 days; subsequently he gained 45 pounds and enjoyed good health; Calmette's reaction was negative; he drank ten to twelve whiskies daily without any apparent effect. No reaction to tuberculosis was noted. His good health continued for two years and two months, when he was admitted to the tuberculous service, where a diagnosis of pulmonary tuberculosis was made. There he developed an acute intestinal obstruction, supposedly from adhesions. Under local anæsthesia an exploratory laparotomy was performed; blood-tinged serum escaped; no mechanical obstruction could be found; the peritoneum was studded with numerous small tubercles. The bowel was paralytic and was relieved by an inguinal colostomy. The patient died two days later and autopsy showed, among other things, a pulmonary tuberculosis, miliary tuberculosis and carcinoma of the stomach, which microscopically was similar to the original growth.

The author reviews five similar combined lesions reported by Claude, Simmonds, Barchasch, Borst and Friedlaender. He further abstracts seven cases of carcinoma of the stomach associated with tuberculous lymphatic glands.

H. A. PORTS.

Finsterer: The Exposure of Inoperable Carcinomata of the Stomach to the X-ray and the Results Obtained (Über die Freilegung inoperabler Magencarcinome zur Röntgenbestrahlung und die damit erzielten Erfolge). *München. med. Wchnschr.*, 1913, lx, 855.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The tumor of the stomach is not anchored anteriorly but only liberated in situ. To make it

more accessible the longitudinal median incision is augmented by a transverse incision three fingers' breadths above the umbilicus, extending through the recti and parietal peritoneum from one costal arch to the other. A gastro-enterostomy is performed as near to the cardiac end as possible; if this cannot be done, a jejunostomy is performed. Both lobes of the liver are anchored subcutaneously to the costal arch with large U sutures of silk to expose the lesser omentum and lesser curvature. The stomach is not anchored. Iodoform gauze strips are placed between parietal peritoneum and duodenum on the right and between peritoneum and transverse colon and spleen on the left to induce adhesions between the organs. To force the lesser curvature downward, a large strip of gauze is placed between liver and stomach on the lesser omentum and fixed with a compression bandage.

One week after the operation the X-ray treatment is begun. A soft tube is employed with a focal distance 20-25 cm., and an intensity one and one half H. After eight to ten exposures, given at three to four day intervals, the dose is increased. If the tumor ceases to be palpable and the abdominal wall connected to thick granulations and adhesions, the abdomen, including the liver area, is exposed to the rays of a hard tube, using a double glass filter and an intensity up to five H. The exposures are given every week at first, later every two weeks. Among seven cases of inoperable carcinomata of the stomach so treated, there was a decided improvement in four. If resection technically is still possible, the entire field, including the lymph region from the pancreas to the liver should be exposed and the X-ray used as above. All injury to the serous coat of the stomach through sutures should be avoided, as gastric fistulae may develop.

COHN.

Jordan: Gastric Ulcer. *Proc. Roy. Soc. Med.*, 1913, vi, Electro-Therap. Sect., 117.

By Surg., Gynec. & Obst.

The author considers the use of the X-rays in the elucidation of the problems of gastric ulcer, and discusses the diagnosis, causes and some terminations. Acute gastric ulcer is passed with the statement that an acute gastric ulcer gives rise to a very persistent spasmodic constriction at the side of the ulcer, this constriction under anæsthesia frequently passing away.

He has observed in twelve patients a reversed peristalsis; operation showing an organic lesion of pylorus or duodenum in each case.

The author insists upon a complete examination of the whole gastro-intestinal tract, which in all ulcers cases shows stasis as the cause of the ulcer, in that there is distention of the duodenum and therefore an inability of the peristaltic contractions to force the contents along. This aggravates the pyloric spasm, which in turn causes dilatation of the stomach with a consequent dragging of the stomach and colon, thereby causing increased tension upon the pyloric attachment. This furnishes the pre-

disposing cause, the primary cause being microbic; the colon bacillus has been found in pure culture at the base of chronic ulcers of the stomach. The diagnosis, after a bismuth meal, is made by the skiagraph and fluoroscope. The article contains many good reproductions from the skiagraphs.

Many ulcers persist for years unrecognized by the X-ray. A few cicatrize completely, leaving a scar with a varying amount of hour-glass constriction. A great many chronic gastric ulcers become cancerous, all such cases showing intestinal stasis with a distended duodenum.

The author thinks that, by an early recognition of gastric and duodenal ulcer with intestinal stasis, many cases of cancer not only of the stomach but of the breast and gall tracts may be avoided, and that the greatest help in these cases is the X-ray.

H. A. PORTS.

Friedenwald: On the Frequency of the Transition of Ulcer of the Stomach into Cancer.

Boston M. & S. J., 1913, clxviii, 796.

By Surg., Gynec. & Obst.

Much interest has been manifested in recent years regarding the frequency of the development of cancer of the stomach upon the scar of an old ulcer. Various authors differ widely concerning the frequency of transition of ulceration into carcinomatous proliferation. Fenwick states that it occurs in 3 per cent, while Wilson and MacCarty place the figures at 71 per cent. Recently Paterson has discussed the subject and while he does not deny the possibility of a transformation, he is doubtful as to the frequency of this transition. He offers clinical and pathological evidence to support his view. The author then discusses briefly the work of Kocher, Gressot and Aschoff.

Aschoff calls attention to the suprising fact that a large number of chronic gastric ulcers, termed callous ulcer by the surgeons, which are apparently ordinary gastric ulcers, appearing microscopically as cancers, are really not ulcers degenerating into cancers, but cancers transformed into typical ulcers. The typical appearance of an ulcer is regularly observed in the callous ulcers, while on the other hand, diffuse cancerous infiltration appeared in the base as far as the serous coat with relatively slight cancerous development in the borders, from which it can be definitely concluded that primary carcinoma with secondary ulceration existed.

The author then reviews one thousand cases which have come under his observation. A history of some previous digestive trouble was obtained in two hundred thirty-two cases, or 23.2 per cent. In this number there were one hundred nine who had slight attacks of indigestion for a period of five years or more preceding the present gastric disturbance, while twenty-five had slight attacks only during the last five years preceding the present disease. Of the remaining one hundred twenty-three cases, thirty-two had chronic indigestion all of their lives, of which twenty-nine had chronic in-

digestion mainly during the last five years preceding the present illness. Seventy-three cases gave a definite history of gastric ulcer. It is therefore evident that in one thousand cases, but twenty-three per cent present a history of any previous digestive disturbance whatever, even in the slightest degree, and that but 7.3 per cent gave a direct history of ulcer. If, therefore, all of the former digestive disturbances be considered as due to ulcer, the formation of gastric cancer from ulcer could not have taken place in more than 23 per cent; if all of the cases with slight digestive disturbances be disregarded in his series, this percentage is reduced even to 12.3 per cent. From these cases the author comes to the conclusion that while gastric ulcers are at times transformed into malignant growths, the change does not take place in more than 23 per cent of the cases and even this proportion is too high.

EDWARD L. CORNELL.

Simon: Contribution to the Treatment of Perforated Gastric and Duodenal Ulcers (Beitrag zur Behandlung der perforierten Magen- und Duodenalulcera.)

Beitr. z. klin. Chir., 1913, lxxxiii, 26.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author deduces from a study of fourteen cases the factors which are of importance in the outcome of perforated gastric and duodenal ulcers, and in this connection discusses the value of jejunostomy as recommended by von Eiselsberg in 1906. In consequence of the rapid onset of peritonitis, the perforation of a gastric ulcer cannot be distinguished from that of other hollow viscera; the anamnesis, which is only too often atypical, must be considered; thus in eight of the fourteen cases a probable diagnosis was made, while three gave no history whatever of gastric disturbance. The increase of the existing pain, the author designates as a "warning precursor."

He describes a case in which the question "fresh perforation" or "warning precursor" remained open. Laparotomy disclosed an ulcer duodeni, almost perforated, with surrounding inflammation and a tendency to adhesions. Rectus rigidity was absent in this case, whereas it is never absent in an actual perforation. Only direct trauma is of importance. Whether a full stomach plays a rôle is doubtful, as perforations also occur at night. The perforation may produce all the symptoms of simple irritation to those of a diffuse peritonitis. Sometimes the sudden onset of severe pain in the upper abdomen followed by a syncope is of value in the diagnosis. A perforated appendix does not pursue such a stormy course; a ruptured tube is differentiated by the history, the viscosity of the blood and the appearance of the patient. In older perforations the presence of a peritonitis only can be determined. Since the peritonitis is more right-sided in both duodenal ulcer and appendicitis, the history must be utilized in the differential diagnosis. The ulcer was found on the anterior wall in 11 cases, the posterior wall in 3, on the pars pylorica, the middle and the cardiac part, in 4 each. In two cases there were duodenal ulcers.

The perforations which are primarily small become larger through the flow of gastric juice and peristalsis; however, they are always smaller than the actual ulcer. Multiple perforations were not observed. In recent cases an acid, opalescent or cloudy serous fluid was found in the abdominal cavity. In older cases the fluid was more purulent and in those operated after 18 hours pure pus was found. Food particles or biliary fluid were not found. The presence of gas points to the stomach as the source. The purpose of the operation is the rapid, certain closure of the perforation, cleansing of the abdominal cavity, and increasing the patient's strength and improving his general condition.

Of the operative methods, the author employed invagination with several layers of sutures and sewing a fold of omentum over these. This seems to be the simplest procedure, though every case has to be decided individually. If invagination obstructs the pylorus, a gastro-enterostomy must be added. The advantages of this are the favorable effect on multiple ulcers, immediate nutrition, increase in the intestinal action, and its simplicity. In jejunostomy the tension on the suture line is less relieved, but this is not so important when the hyperacidity of the gastric juice is diminished. Gastro-enterostomy should be used in ulcer of the pylorus and lesser curvature with stenosis, provided the general condition is good. According to Petrén, two thirds of those operated in the first 12 hours are saved and one third of those operated later. The author records 66 $\frac{2}{3}$ per cent of cures, deducting duodenal ulcers in which the prognosis was poor. Petrén in 1912 reported 52 per cent of cures and Brunner similarly in 1903.

PHILIPPI.

Von Mielecki: Gastric Ulcer in the New-Born (Magengeschwüre bei Neugeborenen). *Berl. klin. Wchnschr.*, 1913, I, 564.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The stomach of a girl infant, who died on the fourth day, revealed in its mucosa numerous ulcers varying in size from a dot to a lentil. Epithelial defects were seen microscopically, the submucosa was exposed and infiltrated. The affection was the expression of a grave catarrhal inflammation which also caused a general icterus.

ZINSSER.

Neudörfer: Pylorospasm and Gastric Ulcer (Über Pylorospasmus und Ulcus ventriculi). *München. med. Wchnschr.*, 1913, IX, 760.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In a review of 120 cases operated during the last five years, the author has determined that there are cases in which the Haudek sign (six hours' stomach rest) is not diagnostic of gastric ulcer. The author agrees with von Bergmann that the ulcers of the lesser curvature and those of the anterior and posterior walls are especially liable to induce pylorospasm. He then describes a case of pylorospasm in which the symptoms and the operative findings — a small calloused ulcer of the lesser curvature and a

rigidly stenosed pylorus — led him to suspect a carcinoma of the pylorus. The specimen, however, (resected according to Kocher's method) showed no trace of carcinoma or ulcer. The ulcer on the lesser curvature healed after that, and the author concludes that the elimination of the pylorospasm, not the altered chemism as obtained by gastro-enterostomy, produced the cure of the ulcer.

THIEMANN.

Dauwe: Contribution to the Study of Stenosing Tuberculosis of the Pylorus (Contribution à l'étude de la tuberculose sténosante du pylore). *Arch. de mal. de l'appar. digest. et de nutrit.*, 1913, VII, 218.

By Journal de Chirurgie.

A young man, 18 years of age, vigorous and in good health up to April, 1909, began at this period to rapidly lose weight and to suffer from gastric disturbances which quickly became more marked. He complained of a feeling of weight after eating, of belching, and later of vomiting. The vomitus was putrid and abundant; it came on several hours after meals and was repeated. There was, nevertheless, no loss of appetite. Upon examination there was a general adenopathy. The lungs were clear. There was slight epigastric tenderness. In the erect posture there was bulging of the abdominal wall and a visible tumor mobile with respiration. Peristaltic waves were observed.

Radioscopy. The stomach appeared as a vertical mass lying entirely on the left side; the horizontal or pyloric portion had but a minimal capacity and was practically invisible. Second examination, eight hours later, showed retention of liquid in the stomach and the presence of distinct contraction waves.

Gastric juice. No free hydrochloric acid; very little pepsin; total chlorides 0.594 per cent; no blood; fermentation acids. For one month the patient was treated by large doses of hydrochloric acid, repeated gastric lavage, and rest in bed. He gained thirteen kilograms in weight, and thought himself cured. Three months later he returned with ascites which, when evacuated by laparotomy, proved to be tuberculous. The cachexia persisted and the patient died soon after.

Autopsy. Tuberculous peritonitis; perigastritis and tuberculous granulations on the peritoneal surface of the stomach. About the pylorus there was present a sort of ring of cartilaginous consistency. There was no histological examination. In spite of this important lacuna, the author classes his case among those of tuberculous granuloma of the stomach, which evolve much like cancer, but are more common among young people. J. OKINCZYC.

Plitek: Duodenal Ulcer (Klinischer Beitrag zur Kenntnis des Ulcus duodenale). *Arch. f. Verdauungskrankh.*, 1913, IX, 197.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Thirteen cases are reported, eleven being men between twenty and forty and two women between

fifty and sixty. All were operated on (gastro-enterostomy, pylorotomy) and the diagnosis was confirmed in each case. A very exact analysis was made of the author's case histories, as to occupation (stooping position), preceding infections, especially syphilis (Wassermann negative in all cases), disease of the stomach in the family, diet (vegetable or meat), alcoholism, abuse of coffee and tobacco, and trauma (skin burns). Among the most important symptoms was pain, the so-called "hunger-pain," appearing three to four hours after taking nutriment, and characterized (1) by its periodicity; (2) its appearance during the night; (3) by growing better or worse on movement and in peculiar positions of the body; (4) by decreasing in summer; (5) and by the presence of a painful area under the right costal arch, at the level of the twelfth thoracic and first lumbar vertebræ. These characteristics varied in different cases. Frequently there was eructation and vomiting (three times bloody) years before the appearance of pain. Occult bleeding was demonstrated only four times. Examination of stomach contents showed the acid contents to be normal five times and increased eight times. The hæmoglobin content of the blood, in eight cases, varied between 85 and 100 per cent, in five cases, between 55 and 85 per cent.

Röntgen examination was of special diagnostic value, as it showed the ulcer in eleven cases out of thirteen. This examination showed: pyloric insufficiency in four cases, pyloric stenosis in three, and pathological niches in the duodenal wall in three. Food residue in the duodenum after seven hours, hypermobility, and localized pain on pressure were each noted five times. Leube's treatment for ulcer did not give good results. The operations were performed within the past six to seven months, so ultimate results cannot be given; however, subjective pain decreased, and there was an increase in strength and capacity for work. One woman died, seven months after the operation, from ileus, resulting from the formation of fibrous bands at the gastro-enterostomy wound. The ulcer was located in the ascending part of the duodenum in eleven cases, in the descending part above Vater's papilla in one; thus, in all cases it was found above the bile ducts. One case showed dilatation of the horizontal part because of stenosis between the horizontal and descending branches. The author mentions as points in the differential diagnosis between stomach and duodenal ulcer that the pain in duodenal ulcer generally decreases on motion and that the temperature is lower. In conclusion the thirteen case histories are given.

SCHULTZE.

Schmieden: Duodenal Ulcer (Ulcus duodenus). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author studied the pathogenesis of duodenal ulcer in Bier's clinic. It is his opinion that a study of the findings at operation, together with the clinical observations, lead to the most reliable conclusions.

The constant bismuth shadows so frequently observed in the upper part of the duodenum on radiographical examination in duodenal ulcer, offer an important hint as to the etiology of the condition. The duodenum should let its contents pass very quickly. The constant presence of acid chyme leads to irritation and ulcer formation in places predispose to it. In the first place, the change in form of the stomach resulting from ptosis causes the upper part of the duodenum to bend at an acute angle, and leads to retention of its contents; moreover, this bend prevents the entrance of the neutralizing alkaline intestinal juices. Duodenal ulcer thus seems to be indirectly caused by the upright position of man. There is a second change in the form of the stomach in duodenal ulcer, which consists in a fixation of the pylorus to the right. The author thinks that this change should not be regarded as a consequence of the duodenal ulcer, but as the pre-existing and accompanying cause of it. Here, too, the duodenum remains full for an abnormally long time. It is caused by the formation of pericolic and pericholecystic fibrous bands which limit the motility of the pyloric region. In such cases the duodenum cannot relieve itself by peristaltic movements. When once a peptic ulcer has made its appearance, it always retains acid contents in its depths.

In looking at these changes, heretofore, cause and effect have been interchanged. Analogies to the causes described above are found frequently in the remainder of the intestinal canal. The author believes that, by the careful use of the Röntgen ray and critical observation of operative findings, other operators will soon confirm his conclusions, and he calls attention to the fact that digestive hypersecretion, hyperacidity and the spastic condition of the area around the ulcer — in which von Bergmann also concurs — can no longer be regarded merely as symptoms of the disease, but that they play a part in its causation.

Mayo: Pathologic Data Obtained from Ulcers Excised from the Anterior Wall of the Duodenum. *Ann. Surg.*, Phila., 1913, lvii, 691.

By Surg., Gynec. & Obst.

The pathological examination of ulcers excised from the anterior wall of the duodenum reveal few of the characteristics of gastric ulcers. Chronic duodenal ulcers usually occur close to the pylorus and formerly, when discovered either at operation or autopsy, were believed to be pyloric in origin and were classified with gastric ulcers. A gastric ulcer is a punched-out defect in the mucous membrane with sclerosed, grayish white base surrounded by thickened margins of somewhat overhanging mucosa. Ulcers on the anterior wall of the duodenum with obstruction and callus, upon excision may show a defect scarcely larger than a dimple, which resembles a little split in the mucosa. It is sometimes surrounded by an area of thickened congested mucous membrane like a patch set in the duodenum. The mucous membrane of the duodenum above the

common duct is smooth, thin, granular, and has few folds. It may be this anatomical peculiarity which prevents the development of thick ulcers of the gastric type that are found on the peritoneal surface which gives the thickness necessary for the base of the ulcer. Ulcers of the posterior wall of the duodenum present the same characteristics as those of the stomach, i. e., a clean-cut, definitely punched-out area attached closely to the pancreas and usually completely perforating the duodenum. They are protected posteriorly by a callus which forms the base of the ulcer. In such cases, however, an anterior contact-ulcer will usually be found just opposite the lesion on the posterior wall. After excising an anterior ulcer, a second may occasionally be discovered posteriorly which has been concealed by the pyloric ring, the ulcer on the anterior wall evidently being secondary and due to contact. The excision of posterior ulcers of the duodenum is so difficult as contrasted with gastro-enterostomy that, although patients recover and remain well, one is not encouraged to continue the practice.

In the author's opinion, therefore, the excision of duodenal ulcers should be limited to those occurring on the anterior wall. The pathological findings in these ulcers of the anterior duodenal wall demonstrate just why this type of ulcer probably is overlooked in the average routine examination of the duodenum at autopsy. The findings also explain why the diagnosis of chronic ulcer of the duodenum may not be demonstrated by the X-ray. The X-ray, however, has been a valuable means of diagnosis in the cases of gastric ulcers and those ulcers of the duodenum accompanied with obstruction, not because of the actual demonstration of the ulcer, but by the determination of deformities and perverted muscular function.

Deaver: Acute Perforated Duodenal and Gastric Ulcers. *Ann. Surg., Phila.*, 1913, lvii, 703.
By Surg., Gynec. & Obst.

Deaver reports twenty-five cases of acute perforation of chronic duodenal and gastric ulcers. Only those cases in which the peritoneal cavity was suddenly brought into free communication with the interior of either viscus through a perforative opening in the base of chronic ulcer, are considered. In the diagnosis of acute perforation, a history of years of suffering, or intermittent indigestion perhaps, with recent recurrence, lasting several weeks and terminating in the present attack, can usually be elicited. Some cases give no such history but after an unusual physical effort, a heavy meal, or in entire absence of such predisposing causes the patient has suddenly been taken with a most agonizing pain in the pit of the stomach.

The *initial pain* in duodenal perforation is often more intense to the right of the midline but finally becomes generalized and more severe in right lower quadrant. Shock was present in over 50 per cent of the author's cases in the early stages. Parietal and diaphragmatic contractions with retching and

vomiting cause painful paroxysms of indescribable intensity. The vomitus is slight in quantity and rarely contains blood. If patient is examined within six hours he is usually found in a variable degree of shock with legs drawn up, abdomen retracted, and exceedingly rigid. Deaver has noted a transverse constriction of the abdomen above the umbilicus as if nature were attempting to isolate the inflamed area. Abdominal tenderness is marked and rather generalized but especially marked overlying the ulcer. Liver dullness may be obliterated with the scaphoid abdomen. The most characteristic sign of perforated duodenal or gastric ulcer is the peculiar density of the abdominal walls. Peristaltic sounds are almost invariably absent. A differential diagnosis between perforative ulcers of the proximal duodenum and the pyloric end of the stomach is usually impossible, except that the former is much more common than the latter.

The author details the history of a typical case and follows with another case in which extravasated fluid from perforated ulcer followed the paracolic grooves along ascending colon, giving rise to a right lower quadrant peritonitis which closely simulated acute appendicitis.

Immediate laparotomy with complete isolation of the ulcer-bearing area by plication with posterior gastro-jejunostomy is the rational surgery of chronic ulceration of duodenum. Pelvic drainage and the Murphy-Ochsner post-operative treatment is used in all cases. Six of the author's cases were admitted in moribund condition and not operated. Of the nineteen operated cases, all were subjected to the complete operation with two exceptions and all recovered except one.

R. W. McNEALY.

Von Haberer: Peptic Ulcers of the Jejunum
(Zur Frage des Ulcus pepticum jejuni). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Von Haberer had the opportunity to interfere five times in cases of post-operative peptic ulcer of the jejunum, only two of which had been operated primarily by him. One must differentiate the ulcer occurring at the anastomosis-ring from the true post-operative ulcer. Many of the explanations for the occurrence of the former (necrosis along the line of suture of the mucosa, small suture-line abscesses in the mucous membrane-ring, etc.) are insufficient to explain the occurrence of the peptic ulcer of the jejunum. Certainly many secondary changes occurring in the anastomosis-ring are taken wrongly for peptic jejunal ulcers. Here belong many of the secondary contractions of the ring, especially after button anastomoses, or after suture in which the opening was made too small for the existing muscular hypertrophy of the stomach. Von Haberer, during the last year, has had occasion to operate three cases in which the pathology consisted of simple contractions of the opening without any trace of recent or old inflammatory processes. If one considers the general chronicity and torpidity

of the post-operative peptic ulcer of the jejunum, one is hardly justified in speaking of cured peptic ulcers when complete negative findings exist at the ring. These facts are really questions of technique, although the possibility of a contraction of the ring, as a result of peptic ulcer of the jejunum, is not denied. In that case, however, one will find, if not the fresh ulcer, the remains of one when the anastomosis ring is renewed. In regard to the exciting causes of peptic jejunal ulcers we know nothing definite. The only certain fact is that hyperacidity of the gastric contents is of decided importance.

The good results obtained in the three cases operated upon by the author justify the recommendation of the radical operation in peptic jejunal ulcers in severe cases, although one can hardly hope to remove the disposition to recurrence. Perhaps severing of numerous nerves may reduce the danger of recurrence. To the question of etiology, nothing positive can be added from the observations. The author, however, was surprised at the length of time that elapsed before any of the patients sought surgical aid. It is also probable that the well-known vicious circle between ulcer and hyperacidity may also increase the disposition to peptic jejunal ulcer. From this, the logical conclusion would be to resort to early and radical operation for every gastric ulcer. Very essential is the strict internal after-treatment of all operated patients.

Cheever: Acute Angulation of the Terminal Ileum as a Cause of Intestinal Obstruction in Certain Cases of Acute Appendicitis. *Boston M. & S. J.*, 1913, clxviii, 719.

By Surg., Gynec. & Obst.

The author reports three cases in which there was an acute angulation of the terminal portion of the ileum following operations for pus appendix. The patients were all operated as soon as they presented themselves at the City Hospital. In two cases signs of intestinal obstruction appeared in three days, while in the third they appeared on the sixth. All the patients rapidly sank and their condition became serious in a few hours. In the first case (age 7) the wound was explored and an ileostomy was performed hastily through the left linea semilunaris. This artificial anus tided the patient through and three weeks later a loop of the terminal ileum with the artificial anus was resected and the bowel repaired by an end to end anastomosis, the patient making a satisfactory recovery. In the second case time was wasted endeavoring to overcome the condition by means of conservative methods. A later ileostomy failed to save the patient. In the third case the terminal ileum was found adherent along the tract formerly occupied by the appendix. It was acutely angulated in the pelvis. The adhesions were separated, the ileum freed, and additional drainage of the bowel established by a tube in the proximal limb. The patient left the table exhausted and died in twelve hours. The choice of an exploratory operation was unfortunate.

The mechanism of this complication is apparently clear. The terminal portions of the ileum occupy the pelvis in the majority of cases, and in the presence of the adhesive plastic exudate which accompanies acute appendicitis it becomes fixed in the course of a few days. Probably no definite harm results in the great number of cases, or nothing worse than some degree of ileostasis, but more rarely, owing perhaps to the crowding out of the pelvis of the rest of the ileum, an acute angulation occurs at the lowest fixed point which, with the condensation of the inflammatory adhesions, affords an obstruction to the passage of gas. Then ensues dilatation; this in turn results in more kinking and a valvelike obstruction which becomes fixed by agglutination of the congested serous surfaces.

From the three cases considered the author comes to the following conclusions: In acute pelvic appendicitis, where the inflamed or gangrenous appendix has been torn from its bed on the lateral pelvic wall, from the brim to the floor, the occurrence of the earliest symptoms of intestinal stasis, especially if appearing after an interval of a few days of normal convalescence, should lead to the assumption that there exists an acute angulation of the terminal ileum at the pelvic floor. After eliminating poorly placed drains as a factor, a secondary operation should be performed. If the patient's condition does not justify this, a better than forlorn hope is offered by ileostomy.

EDWARD L. CORNELL.

Ach: Arterio-mesenteric Ileus (Arterio-mesenterialer Ileus). *Beitr. z. klin. Chir.*, 1913, lxxxi, 721.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Gastro-duodenal or arterio-mesenteric ileus (acute dilatation of the stomach) is caused by the small intestine prolapsing into the pelvis and exerting traction on the mesentery which causes a compression of the duodenum with secondary acute dilatation of the stomach. According to other investigators, the acute dilatation is primary and the obstruction of the duodenum secondary. The author has conducted extensive animal experiments and believes that the acute dilatation of the stomach is caused either as a result of a disturbance of the nervous mechanism due to the anæsthetic, or mechanically as a result of the operation leading to overfilling of the stomach with dilatation. The author advises gastric lavage and the Schnitzler stomach position, by which the ileus can usually be overcome. A posterior gastro-enterostomy is only to be considered in the very severe cases. KNOKE.

Fowelin: Anæsthesia of the Right Iliac Region for Operation in Chronic Appendicitis (Die Anæsthesierung der rechten Darmbeingrube bei der Operation der chronischen Appendicitis). *Zentralbl. f. Chir.*, 1913, xl, 342.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Fowelin operated cases of chronic appendicitis under local anæsthesia by the following method:

After anæsthetizing the abdominal wall, the needle is carried from the anterior superior spine toward the median line and plunged deeply into the iliac fossa, and then laterally along the peritoneal wall so that the injected fluid is well diffused. The method was tested in fifty-four cases. In five cases, the anæsthesia was not sufficient and had to be supplemented by chloroform. The ligation of the mesentery of the appendix was painful in all cases.

HIRSCHEL.

Lougard: A Contribution to the Treatment of Acute Suppurative Appendicitis; a Report of a Series of 100 Cases (Beitrag zur Behandlung der akut eitrigen Appendicitis; Bericht über eine zusammenhängende Serie von 100 Fällen). *Arch. f. klin. Chir.*, 1913, ci, 123.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author analyzes a series of 100 cases of acute suppurative appendicitis with perforation and involvement of the peritoneum from the surgical department of Forst-Achen hospital. The results prove the advantages of the early operation immediately after a diagnosis is made. A total of 177 operations were performed on the 100 cases, with a mortality of 16 per cent. Excluding one pleura empyema operation, all of the operations were performed either for the cure of the hernia or for ileus.

Following the primary operation 16 deaths occurred (10 of peritonitis, 4 of sepsis, 2 of ileus). No deaths occurred as a result of the secondary operations. The author then reviews the clinical symptoms, diagnosis, therapy, and tabulates the cases. In peritonitis Lougard prefers the dry swabbing of the pus and he has improved his results since he injects about 50 cc. of camphorated oil into the peritoneal cavity.

DE AHNA.

Fowler: A Note Upon the Treatment of Diffuse and Spreading Appendicular Peritonitis; Summary of 78 Cases. *Am. J. Surg.*, 1913, xxvii, 189.

By Surg., Gynec. & Obst.

In the series of 69 cases already reported, 48 deaths occurred, making a mortality of 69.5 per cent.

Peritoneal lavage was performed in fifty cases with a mortality of sixty-six per cent. In nineteen, irrigation was not used and they showed a mortality of 78.9 per cent. Postural drainage was instituted in thirty-two cases with 16 deaths, a mortality of 50 per cent. Fifteen cases occurred prior to 1900, the year this method of treatment was devised by the late George Ryerson Fowler, and fifty-four cases were after 1900. Death occurred in eighteen of the twenty-two cases in which postural drainage was not employed, making a mortality of 81.8 per cent, or an increase over those treated by postural drainage of 31.8 per cent. The mortality of fifteen cases occurring in 1898 and 1899 was 93.3 per cent, the mortality of fifty-four cases occurring in the successive years up to 1908 was 62.9 per cent. In four cases enterostomy was performed; three died, a mortality of 75 per cent.

The author makes the McBurney incision, or a modification (the Fowler), and the rectus with about equal frequency; removes the appendix when possible and usually inverts the stump. Peritoneal lavage is not employed. Rubber tube drainage is preferred.

After careful consideration of these cases, the author concludes: (1) It is strongly advised that suspected cases of acute appendicitis be placed and maintained in the Fowler position. Postural drainage to be effectual must be maintained all the time. Early institution of postural drainage is of greater benefit to the patient in preventing septic material from reaching the diaphragmatic peritoneum than in preventing further absorption after this area is once involved. Ambulance cases of appendicitis should be brought to the hospital in the sitting posture. The trunk should be elevated during the operation. The cart which transfers the patient to and from the bed should be elevated at the head. (2) Ochsner's treatment should be instituted before and after operation and Murphy's protoclisis should be practiced.

The following table appertaining to the entire series is of interest and shows the mortality during the successive years with different methods of treatment.

Year	Cases	Deaths	Mortality	Irrigated	Died	Not Irrigated	Died	Postural Drainage	Died	No Postural Drainage	Died	Enterostomy	Died
1898.....	4	4	100%	4	4	0	0	0	0	4	4		
1899.....	11	10	90.9%	8	7	3	3	0	0	11	10		
1900.....	8	6	75%	6	4	2	2	1	1	7	5		
1901.....	5	2	40%	4	2	1	0	1	0	4	2	2	1
1902.....	2	2	100%	1	1	1	1	0	0	2	2	1	1
1903.....	4	4	100%	2	2	2	2	4	4	0	0		
1904.....	10	7	70%	8	6	2	1	6	3	4	4		
1905.....	7	4	57.1%	4	2	3	2	5	2	2	2		
1906.....	7	5	71.4%	3	2	4	3	4	2	3	3		
1907.....	11	4	36.3%	10	3	1	1	11	4	0	0	1	1
1910-1913....	9	3	33 1/3%	0	0	9	3	9	3	0	0	1	1
Total....	78	51		50	33	28	18	41	19	22	18	5	4
Mortality			66+%		66%		64+%		46+%		81.8%*		80%

*Statistics since 1900; i. e., when postural drainage was first advocated.

Arnaud: Appendicostomy (L'Appendicostomie). *J. de chir.*, 1913, x, 273. By Surg., Gynec. & Obst.

Like all fistulæ established in the intestinal tract, appendicostomy would appear to serve both as a way for the introduction of solutions and as an exit for intestinal contents. As to the latter, the author asserts that while not serving in the capacity of an artificial anus, yet, except where the cæcal contents are too dense, appendicostomy may serve a useful means for evacuating both large and small intestine.

The technique of the operation is varied according to the mobility and position of the cæcum and appendix. M. Arnaud describes two methods—the pure, and the modified appendicostomy in which the blood supply of the appendix is cut off through ligation and section of its mesentery. In the pure

appendicostomy, which is preferable when the procedure is desired only for the introduction of solutions, the author insists that the cæcum be stitched to the parietal wall, using a collar stitch taking in an area about the appendix the size of a silver dollar. The modified appendicostomy is essential in all cases when an opening is desired to evacuate the intestine. This technique has been used even where the appendix was gangrenous (Wilms). The appendix is not opened for 24 to 48 hours, by which time there is no danger of contaminating the abdominal cavity. Appendicostomy has one great advantage over cæcostomy. It heals spontaneously or after a light application of the cautery. It has no disadvantages, for it can be easily converted into a cæcotomy. The mortality from appendicostomy is practically nil.

Among the many uses of appendicostomy the treatment of colitis is of first importance. No matter what the form, all are benefited, the ulcerative type being most favorably influenced. But appendicostomy is better than cæcostomy, on account of the ease with which the fistula is closed. If the disease be limited to the rectum or sigmoid, it would seem that colostomy in the left iliac region would be the operation of choice, both because of the ease of topical applications and because it affords egress for all faecal matter thus giving complete rest to the diseased parts. It has the one great disadvantage of being difficult to close — often requiring a serious second operation for this purpose. Appendicostomy gives excellent results, even in inflammations of the rectum, and should always be tried before colostomy. In irrigating the bowel through an appendicostomy, a tube should also be inserted into the rectum to prevent over-distention and possible rupture.

In affections of the small intestine, appendicostomy is particularly useful in those cases of enteritis involving the lower part of the ileum. The modified operation should always be used; the best results being obtained by retrograde catheterization of the ileo-cæcal valve, using a female glass catheter. All manipulations must be very gentle to avoid perforation of the diseased intestine. The author recommends it in cases when, from symptoms of perforation, a laparotomy has been performed. If there is no perforation, the ensuing relief of the tension within the intestine due to the appendicostomy eases the patient and decreases the danger of perforation. Large quantities of normal saline solution can be introduced into the cæcum with advantage.

Appendicostomy in occlusions is primarily indicated in cases of paroxysmal attacks of an obscure nature, seen mostly in old people. A laparotomy shows no definite cause for obstruction; appendicostomy frequently relieves the symptoms. In dynamic obstruction, no matter where located, appendicostomy is the operation of choice. If the obstruction or occlusion is due to a new growth of the large intestine, colostomy is the operation of choice, provided the tumor cannot be removed. If,

however, it is determined that the growth can be later excised, appendicostomy will permit of sufficient temporary drainage.

In inveterate cases of chronic constipation which have resisted all medicinal treatment, appendicostomy, by providing an easy method of introducing oil for lubricating the bowel and liquids for macerating the caked faecal masses, affords marked relief.

Arnaud claims definite indications for appendicostomy in all forms of serious peritonitis with paralysis of the bowel. It not only affords a means of egress for the retained gases and toxic fluids, but saline solutions may be easily administered by the drop method. It can be given with the patient in any position, the tube is not displaced if the patient is restless, and above all, there is no such discomfort as is caused by the rectal administration. It should be employed in all cases where peritonitis is due to a perforation of a viscus in order to relieve the tension on the closing suture.

As complementary to other interventions, in cases of resection of the bowel with anastomosis, appendicostomy has been performed to relieve tension on the sutures. After cases of intussusception in infants, it is recommended as a means of fixation of the cæcum and at the same time affording a way to introduce saline solution and heat. In volvulus of the cæcum, it fixes the cæcum and prevents recurrence.

As a means of nourishing the patient, nothing can supplant the gastrostomy if an artificial opening is necessary into the digestive tract. But where the obstruction is low down, or when it is desired to nourish the patient artificially for a short time only, appendicostomy is infinitely superior to jejunostomy and to rectal feeding.

Finally, appendicostomy has been recommended and used as a means of draining and thus curing the diseased appendix. The author does not sanction this procedure, because chronic appendicitis often causes the conditions for which it is so carefully conserved, namely, constipation and colitis. He concludes that this organ, so long considered a menace to life and a useless appendage, has been shown to possess properties which entitle it to be rehabilitated as a valuable adjunct to the human economy, not to be removed without adequate cause.

ELLIS FISCHER.

Legrand: An Attempt at Surgical Treatment of Intestinal Bilharziasis by Evisceration and High Resection of the Ano-Recto-Sigmoid Mucous Membrane (Essai de traitement chirurgical de la bilharziose intestinale par éviscération et résection haute de la muqueuse ano-recto-sigmoïdienne). *Rev. méd. d'Égypte*, 1913, i, 10.

By Journal de Chirurgie.

Madden and Goebel describe two forms of bilharzial rectitis, which, however, are presumably but two successive stages of the evolution of the disease: the first is characterized by marked redness, thickening, granular aspect of the mucosa, with tenesmus

and catarrhal or purulent secretion; in the second, there is marked infiltration and development of polyps, the size of a pea, a cherry, or even of a pear. These polyps are pedunculated, sometimes bifid or even ramified. Digital examination detects them in the rectal ampulla, either single or multiple, and, in the latter case, sometimes grouped in large and numerous clusters. The irregular outline of the thickened sigmoid stuffed with polypi may perhaps be felt through the flaccid and wasted abdominal wall. The consistency of the polypi is soft and brittle; they are very mobile, slip between the fingers easily and bleed readily. Consequently, during this stage of the disease, the stools are very frequent. They are fecal in character but once or twice a day, all the others containing only blood and mucus. There may be from 10 to 30 stools a day, as in dysentery, hence the name of bilharzial dysentery bestowed upon this condition by Firket.

Sometimes the rectal ampulla is the starting point of simple or branched fistulae which open on the skin of the anal margin, within or without the sphincter, on the buttocks, or on the internal aspect of the thighs. The tissues surrounding said fistulae are sclerosed, sometimes even of cartilaginous hardness and the skin assumes a warty-like appearance. Internal medication is altogether powerless against this condition. The knife and the sharp spoon are indicated. Wildt advocates the excision of the accessible polypi, after anal dilatation and incision of the sphincter. Goebel and Madden recommend scraping the mucosa, or even intestinal resection.

Legrand suggests for such cases a new operation which he calls *evisceration and high resection of the ano-recto-sigmoid mucosa*. On the whole this procedure is derived both from Delorme's and from Juvara's techniques for rectal prolapse, or it may be likened to a Whitehead operation for hæmorrhoids extended high up. In two cases operated on by him, the author resected 11 and 10 inches of mucous membrane, respectively. However, in the first case, the resection proved to be not far-reaching enough, for two unremoved bilharzial polypi were subsequently found in the lowered sigmoid. One must not, therefore, hesitate to remove an extensive area of mucosa—Delorme's resection of 32 inches for ano-rectal prolapse shows how great a leeway there is in this matter. Post-operative recovery was perfect in both cases of Legrand's, but the therapeutic end-result remains undecided, as neither patient could be followed.

The author himself sets forth the criticism his operation is open to. It is difficult, tedious and entails considerable loss of blood. The post-operative period is painful and patients run the risk of a partial but protracted incontinence of the sphincter. Furthermore, there is a possibility of tight cicatricial stricture if the stitches cut through and the upper end of the mucosa retracts. Finally, even taking for granted that all polypi have been removed, will not the adult worms harbored in the portal vein lay eggs which ultimately will cause the condition to

recur? This is undoubtedly the most serious objection against the method; time alone will tell whether it is justified or not.

J. DUMONT.

Rydygier: Operative Treatment of the Tumors of the Sigmoid Flexure and Rectum (Jak należy postępować wobec nowotworów esicy i odbyłnicy). *Przegl. chir. i ginek.*, 1913, viii, 54.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The material at the Lemberg clinic consisted in 74 cases, the histories of which are given at the close of the article. Early diagnosis is important; therefore early digital examination is considered very valuable. The rectoscope is to be used cautiously and if possible always under the control of the eye. The excision of a piece of tissue for diagnostic purposes has been discarded, as the nature of the disease was evident in the majority of cases. The fact that the tumor is high up or has spread to the prostate, vagina or bladder is no contra-indication, according to author, but he does not operate if it involves upper portions of the sacrum. The preparation of the patient is begun one week before the date set for operation and consists of castor-oil and enemas. Opiates are given before and after the operation. Excochleation before operation is condemned on account of danger of bowel perforation. If the tumor is located at the junction of the rectum and sigmoid, an artificial anus is made about two weeks before the date set for the final operation. It is made in the mid-line above the umbilicus, the transverse colon being used. The diseased portion is then thoroughly irrigated.

The author discards the operation per rectum and favors the abdominal or abdomino-sacral route. He makes skin and bone flaps en masse out of the transversely divided sacrum, which is turned outward. He warns against opening of the bowel before the segment has been completely separated. The peritoneum is opened to remove any involved glands. The superior hæmorrhoidal artery is ligated. After resection, the cut end of the bowel is fixed at the anus, retaining, if possible, the sphincter function. Tamponade is placed in the wound. In suturing the bowel, the author advises careful suture of the mucosa, as hæmorrhages are thus avoided. At the Lemberg clinic 86.8 per cent of cases were operated radically. The mortality of the radical operation was 37.9 per cent, while in the palliative method it was 10 per cent.

WERTHEIM.

Chalier and Bonnet: Primary Melanotic Tumors of the Rectum (Les tumeurs mélaniques primitives du rectum). *Rev. de chir.*, Par., 1913, xlvii, 64, 235, 372, 503.

By Journal de Chirurgie.

Chalier and Bonnet report a case of melanotic tumor of the rectum, together with conclusions drawn from 64 similar cases reported in the literature. The autopsy showed generalized metastatic tumors in practically all the organs of the body. Rectal melanoma are generally confined to one wall of the anal-rectal canal, usually the posterior, and show no

tendency to become annular. They may form multiple tumors which usually become pedunculated. The primary tumor develops in the submucosa, infiltrates the muscularis and pushes forward the mucosa, which frequently becomes ulcerated. Melanotic venous nodules are sometimes observed in the perianal region. The perirectal cellular tissue is sometimes packed with melanotic nodules, but in contra distinction to other cancers, anorectal melanoma seem to have no tendency to invade neighboring organs nor to form adhesions with them; on the other hand, rapid and multiple metastases occur at a distance. Glandular metastases are the rule; cutaneous nodules are somewhat rare; and melanotic metastases may be uncolored.

The authors object to the classification of these tumors as sarcoma on the basis of their cellular form, since this is modified by compression. They consider these tumors as melanotic epitheliomas, their histological studies having led them to believe that the malpighian layer (from the anal cutaneous zone) is the point of origin. These tumors are therefore cutaneous epitheliomas which clinically show themselves as rectal tumors, because of their upward infiltration in the submucosa of the rectum with later secondary ulceration or pedunculation into the rectum.

The clinical symptoms of these tumors are very variable. Their evolution may be absolutely latent. There is also a painful form which shows symptoms of obstruction, diarrhoea and hæmorrhage. Other cases show as the prominent symptom secondary prolapsus, adenopathy or simply the presence of a tumor. The examination may reveal submucous or subcutaneous nodules at the anus or a polyp which must be distinguished from the usual hæmorrhoids or polyps. These tumors are mobile, often surrounded by satellite nodules and usually, early at least, covered by normal mucosa. They are situated low down, are non-annular and have a nodular surface. Melanotic cachexia, which closes the picture, may be diagnosed by the presence of pigmented granules in the blood and by the examination of the urine. The total duration of the disease rarely surpasses one year. The only treatment is surgical. General melanosis alone forbids intervention and, even in this case, the authors believe that frequently a palliative operation is to be recommended. The authors advise a radical amputation of the rectum, combined with a systematic extirpation of the inguinal glands.

In the cases reported, the operative mortality was 12 per cent. The late results were studied in 29 cases. Eight patients are still living, two without recurrence, three with local recurrence, one with glandular recurrence, two with recurrence and metastases; twenty-one patients have died, four from local recurrence, seven from recurrence and metastases, seven from metastases without recurrence, and three from unknown causes. Metastases are found, therefore, in 55 per cent of the cases and

recurrences in 58 per cent. Recurrence is usually local or glandular. Certain of these recurrences have been operated with prolongation of the period of survival.

J. OKINCZYC.

Ach: Transplantation of Fascia for Rectopexy and Nephropexy (Fascientransplantation zum Zwecke der Rectopexie und Nephropexie). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In a rectopexy, Ach exposes the pouch of Douglas by means of a transverse supra-symphyseal incision with the pelvis elevated and strong traction on the pelvic colon. After incising the peritoneum, he mobilizes the rectum widely downward up to the proximity of the sphincters, and dissects between vagina and rectum. He then removes a strip of fascia lata from the thigh 25 cm. long, 8 cm. wide, and transplants this to fix the rectum and vagina. The flap is split longitudinally, one strip being carried almost circularly around the rectum and fixed to the rectum with a large number of sutures. The other strip is brought down anteriorly between rectum and vagina. With its free edges, it is fixed first to the rectum and then to the upper half of the vagina. To prevent adhesions, the fascial flap is placed extra-peritoneally so that the peritoneum, after the right ureter is pushed back, is undermined through the right ligamentum latum up to the horizontal ramus of the pubis. The fascial flap is now fixed here by a series of sutures at Cooper's ligament, after the rectum and vagina have been pulled up as far as possible by strong traction. The free edge is again planted extra-peritoneally in the abdominal wall and fixed to the musculature with sutures.

Ach operated a patient with high-grade rectal and vaginal prolapse nine months ago. The fascial flap healed smoothly and, up to the present time, the patient has had no recurrence, in spite of the extraordinarily wide and weakened pelvic floor.

For purposes of nephropexy, Ach has also used a fascial flap as fixation material. The course of the operation was as follows: The kidney was exposed through a Simoris lumbar incision and by luxation. An incision 7 cm. long was made through the capsula fibrosa in both the anterior and the posterior surfaces. The fibrous capsule was separated by blunt dissection from one incision over the convexity to the other. A flap of fascia lata 20 cm. long and 6 cm. wide was pulled through; the two incisions were united, thus the fascial flaps are twice pierced by each individual suture. As a result the kidney is completely enclosed in a fibrous sac with firm anterior and posterior reins well designed for fixation. After reposition of the kidney these reins are fixed to the deep as well as the superficial leaves of the fascia lumbodorsalis.

Up to the present time Ach has operated ten patients. The first operations were done two years ago. The fascial flaps healed well in all cases and the result was successful. None of the kidneys

became mobile. A cure resulted in all except a hysterical person, who admits an improvement, but is not cured.

Dagaew: Changes in the Digestive Processes after Gastroduodenostomy, Gastrojejunostomy, and after Total Extirpation of the Stomach (Änderungen in den Verdauungsprozessen nach Gastroduodenostomie und Gastrojejunostomie, und nach totaler Magenextirpation). *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 176.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports the results of his studies of the digestive processes in dogs after resection of the pylorus and after total gastrectomy. The chemical analysis of the stomach and bowel contents was made after the temporary isolation method of London. Six dogs were operated according to the method of Kocher (gastroduodenostomy) and according to Billroth II (gastrojejunostomia antecolica anterior with anastomosis according to Braun). On two dogs gastric fistulae were made, and on four bowel fistulae, 125 cm. above the valve of Bauhini. The pyloric ring and the pars pylorica of the stomach were entirely resected. Experiments with five per cent grape sugar solution gave constant results — the solution left the stomach much slower after pyloric resection, and it was more retarded after the Billroth operation. Further experiments with meat, amyloextrin, fat, bread and milk showed still greater retardation. After excluding the rhythmic contraction of the pylorus, the stomach contents are propelled much slower, apparently because the reflex mechanism is absent (which acts as a transporting elevator or suction apparatus and overcomes the resistance of the bowel much easier. The second and constant phenomenon is the return flow of the transpyloric secretion into the stomach, as described by numerous authors, persisting one and one half years after the operation. This returned bowel secretion serves to split the carbohydrates thoroughly; digestion of albumin occurs in an alkaline medium through the action of pancreatic ferments, and the fats become saponified, all in an organ normally not adapted for such work. In the stomach of operated dogs, digestive processes take place which normally occur in the duodenum, and upper and middle third of the small intestine. The small intestine accommodates itself to these conditions remarkably, corrects the processes and completes the digestion, as is shown by the author's experiments.

One dog operated according to Billroth's method developed three peptic jejunal ulcers opposite the anastomosis, and severe catarrh of the intestine. Two other dogs showed atrophic pancreatic cirrhosis and the dogs operated on according to Kocher's method showed no such changes. The author therefore prefers the Kocher method. The cure of an ulcer of the stomach is therefore, according to the author, dependent on the altered chemism of the stomach contents. After a total gastrectomy the author was able to find but few phenomena. Of the

total food ingested, thirty per cent nitrogen was observed, fifty-eight per cent sugar and forty-five per cent fat. The dog did not lose weight, had a good appetite and passed normally formed faeces. At autopsy, the duodenum was found markedly distended, its walls thinned, and the epithelium atrophic.

ADLER.

LIVER, PANCREAS, AND SPLEEN

Boljarsky: Injuries of the Liver, According to the Data of the Surgical Department of the Obuchow City Hospital for Men in St. Petersburg (Die Leberverletzungen nach den Daten der Chirurgischen Abteilung des städtischen Obuchow-Hospitals für Männer in St. Petersburg). *Russk. Vrach*, 1913, xii, 287.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports 109 cases. He divides all cases into subcutaneous or closed and open injuries. These may be subdivided into uncomplicated and those complicated by injuries of other organs.

Among the 109 cases were 18 subcutaneous ruptures of the liver with 3 cures and 2 complicated ruptures, both of which died; 6 gunshot injuries with 4 cures, of which 4 were uncomplicated; 85 stab and incised wounds, with 59 cures, of which 47 were uncomplicated with an exitus in 6, and 38 were complicated with an exitus in 21. The right lobe and its upper surface are most often injured. Sixteen wounds went through the liver; in 1 case the wound went from below upward damaging the gall-bladder. The size of the wound was 0.5-1.5 cm. in diameter and 8-10 cm. in depth. In 1 case a part of the right lobe, the size of an adult fist, was torn off. The complicated injuries involved, besides the liver, the stomach (10 cases), intestine (2), lung (2), pancreas (2), mesentery (2), spleen (1), gall-bladder (1), pericardium (1), and kidney (1). The liver was injured through the pleura and diaphragm 29 times. In 4 cases the stomach and intestines prolapsed. Most injuries occurred in persons between the ages of 21 and 30. Forty-six of the 109 cases died (mortality 42.2 per cent). The percentage of exitus in the various forms of injuries is as follows: subcutaneous rupture of the liver (83.3 per cent), gunshot injuries (33.3 per cent) stab and incised wounds (30.8 per cent). Of 47 cases of uncomplicated stab and incised wounds of the liver, 6 died and 41 got well (12.6 per cent exitus). The mortality was lowest where cases were operated on in the first 2 to 3 hours. After 24 hours the mortality rises to 80 per cent and over.

The causes of death in uncomplicated cases were: hæmorrhage in 7 cases, peritonitis following liver abscess in 2. The treatment aims at arresting the hæmorrhage in injuries of the liver. The author prefers tamponing the liver wounds with free flaps of omentum, which acts mechanically and helps coagulate the blood, to suturing and the Marly tamponade. This tamponade was successfully used in 18 cases. With this treatment

the patients remained in the clinic on an average, 30 days; with a Marly tamponade they remained 60 days.

JOFFE.

Brault and Grégoire: Chronic Icterus Due to Retention; Stenosis of the Ductus Choledochus; Choledochoduodenostomy (Ictère chronique par rétention; sténose du cholédoque; cholédoco-duodénostomie). *Bull. et mem. Soc. Med. d. Hôp. de Par.*, 1913, xxix, 855.

By *Journal de Chirurgie*.

A woman of 48 years had suffered since the age of 22 with pains in the right hypochondrium. In December, 1911, following a particularly painful attack which was accompanied by vomiting and diarrhoea, icterus appeared and persisted. In April, 1912, the icterus which had become chronic was still intense and the stools were constantly pale. In the four months which had passed there had been, nevertheless, two periods of slight remission, during which the jaundice had been somewhat less marked and the stools somewhat darker. In April, there was no longer any pain. The temperature had never risen above normal and the general condition of the patient was excellent.

The patient was operated on the 18th of April, 1912. Kohr's incision. The gall-bladder was found to be fibrous and contracted to the dimensions of a nut. It seemed packed with calculi and the region of the cystic duct was masked by adhesions. The cystic duct itself was dissected in its lower portion and was then found to be reduced to a fibrous cord, the lumen being completely obliterated.

While searching for the ductus choledochus a serious arterial hæmorrhage occurred which seemed to come from the hepatic artery or from some important anomalous branch. A finger was introduced into the foramen of Winslow and anterior pressure was exerted, which produced immediate cessation of the bleeding. The artery was then found to show a small hole which was obliterated by lateral ligature with fine silk. There was no further bleeding from this source, and the arterial pulsation above the ligature was assurance that the circulation had not been interrupted.

The ductus choledochus was not dilated but appeared very friable. A No. 10 sound could not be passed lower than the superior pancreatic portion of the duct and only the finest curved sound could be passed into the intestine. No calculus was discovered by this maneuver. The head of the pancreas was not indurated and showed no appreciable signs of inflammation. Grégoire considered that there was present a double stenosis of the biliary ducts; that is, a complete obliteration of the cystic duct and a partial stenosis involving the whole ductus choledochus, but most marked in its lower portion.

The ductus choledochus was divided down as low as possible and the superior portion implanted on the upper surface of the first portion of the duodenum. Two layers of sutures were used, the first complete

and the second superficial. The infra-hepatic compartment was packed.

The post-operative course was simple. At the end of four weeks all trace of icterus had disappeared and the wound was closed in six weeks. The patient, when seen one year later, was in perfect health, yet the conjunctivæ still had a slightly icteric tinge. Brault and Grégoire state that eleven similar cases have been previously published in France of surgical treatment for sclero-cicatrical stenosis of the chief biliary duct.

MAURICE CHEVASSU.

Friedrich: Pancreatic Affections and Rare Affections of the Duodenum and Their Value for the Differential Diagnosis of Duodenal Ulcer (Pankreatische Affektionen und Seltene Affektionen des Duodenums in ihrer Bedeutung für die Differential Diagnose des Ulcus duodeni). *Deutscher chir. Kong.*, 1913. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author discusses pancreatic affections (unusually large stones, pancreatitis) and rare affections of the duodenum (carcinoma, polypi, diverticula) in regard to their significance in the differential diagnosis of duodenal ulcers. He bases his conclusion on sixteen of his cases. (Among one hundred and ninety-three stomach and duodenal operations, there were only five for duodenal ulcer and 2 for cancer duodeni.) In the case histories of duodenal ulcer a long period of illness, generally termed "stomach trouble," always precedes. Vomiting occurred frequently, nocturnal pain regularly, and now and then also self-observed emaciation. Symptoms of stenosis and hæmatemesis are found especially in duodenal cancer; blood in the stool occurs also in duodenal ulcer. "Hunger pain" was only occasionally observed in ulcer; duodenal flatulence was more frequently found in associated or isolated affections of the pancreas (pancreatitis, stone in pancreas, pancreatic dermoid).

In six out of fourteen cases of ulcer and carcinoma of the duodenum, the pancreas was also involved, and three times in cases of ulcer. The author gives the details of all his findings. In two of the six cases of carcinoma of the duodenum, pressure upon the common and pancreatic ducts set in, causing melano-icterus and necrosis of the pancreas. In addition, the author reports two cases in which a large diverticulum of the duodenum containing a pancreatic stone (3.9 x 3 cm.) caused fatal complications. These diverticulæ were pressing against the common duct opening.

Nordmann: Experimental and Clinical Relations between Acute Necrosis of the Pancreas and Cholecystitis on the One Hand and Cholelithiasis on the Other (Experimentelle und klinische Zusammenhänge zwischen akuter Pankreasnekrose und Cholecystitis bzw. Cholelithiasis). *Deutscher chir. Kong.*, 1913.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Nordmann points to the fact that in 40 per cent of all cases, acute necrosis of the pancreas is associated with either cholecystitis or cholelithiasis. In the

experiments heretofore conducted to explain these relations, infected bile was injected into the ductus pancreaticus. The positive results of pancreatic necrosis obtained in this manner were, according to the author, caused by the fact that the very fine branches were probably ruptured and the pancreatic secretion was pressed into the pancreatic tissue. The results thus obtained, therefore, do not perfectly parallel pathological conditions as they occur in man. In his experiments on thirty dogs he closed up the papillæ with a silkworm-gut suture and injected bacterial mixtures into the gall-bladder. It was possible, in this manner, using careful technique and not handling the pancreas, to produce a typical acute pancreatic necrosis associated with hæmorrhage and extensive necrosis of fatty tissue which is macro- and microscopically analogous to that which occurs in man. If only the upper papilla is ligated and the lower duct remains untouched, no changes occurred in the pancreas, in spite of infection of the bile tracts. The results were likewise negative if both the papillæ and the common duct were ligated alongside of the pancreas, and infection material then introduced into the gall-bladder. Nordmann is of the opinion that in these experiments pancreatic necrosis was influenced by three factors: (1) by the simultaneous exclusion of all pancreatic juice and bile from the duodenum, which must be complete; (2) by the presence of infectious material in the gall-bladder; (3) by the anatomical structure, as seen by the course of the ductus choledochus and ductus pancreaticus in the dog, which occasionally resembles the anatomical relations found in man. Both ducts empty into the upper papilla in the duodenum and frequently form a small ampulla by their union above the papilla so that, in closure of the latter, bile can enter the ductus pancreaticus. The clinical observations of Nordmann completely correspond with these experimental results.

He had the opportunity to operate on eight cases of severe acute pancreas necrosis. In the first four cases the pancreas was decapsulated and drained from all sides, either through the ligamentum gastrocolicum or through the lesser omentum. This procedure was followed by abdominal lavage. All died in collapse shortly after the operation. In the next three cases, the gall-bladder was drained in one and extirpated in two. In these three cases, drainage of the bile ducts was done in addition to decapsulation, drainage, and tamponade of the pancreas. All recovered. The eighth case was not operated on on account of collapse, and a few days later a large left-sided subphrenic abscess was opened. One patient who had a very severe gall-stone colic and slight icterus preceding the attack recovered. Autopsy or the operation revealed the presence of gall-stones in all cases. Pancreatic secretion was discharged through the common bile-duct drain in all cases in which the gall-bladder was opened. From this the author concludes, with certainty, that both ducts unite some distance above the papil-

la. In view of these clinical experiences, confirmed by experimental evidence, the author advises, wherever possible, to drain the gall-bladder and the common bile-duct in every case of acute pancreatic necrosis. The gall-bladder should be extirpated when the patient's condition permits it, if it is easily accessible and marked changes have taken place.

Carwardine and Short: The Surgical Significance of the Accessory Pancreas. *Ann. Surg., Phila., 1913, lvii, 653.* By Surg., Gynec. & Obst.

The frequency and position of an accessory pancreas with the conditions in which it may give rise to surgical affections are discussed by the authors. Two case histories are cited. Until 1908 only 39 cases of accessory pancreas were on record.

The accessory pancreas is a small, rounded nodule, which may be as large as a filbert, situated somewhere in the wall of the alimentary canal, though in one case it was found in the abdominal wall. The common situations are: (1) in the wall of the stomach; (2) in the wall of the duodenum; (3) in the first eight inches of the jejunum; (4) in lower jejunum or ileum. Histologically, the accessory pancreas shows typical pancreatic structure and well defined ducts.

The accessory pancreas may give rise to trouble in four ways: 1. It may produce mechanical alterations in the walls of the alimentary tract. Several such cases have been recorded. 2. It is liable to acute pancreatitis. The authors give the history of their own cases coming under this class. 3. It may develop chronic interstitial pancreatitis. 4. It may complicate the diagnosis of the cause of abdominal symptoms. R. W. McNEALY.

Fowler: Cysts of the Spleen. *Ann. Surg., Phila., 1913, lvii, 658.* By Surg., Gynec. & Obst.

Fowler's article is a very comprehensive one dealing with a pathological and surgical study of cysts of the spleen. He maintains that a distinction must be made between (1) hæmatomas, (2) cysts arising from the disintegration of splenic tissue, and (3) genuine cysts. The latter he divides into dermoid, parasitic, and non-parasitic cysts.

Cysts were found by him to be slightly more common in women between the ages of 30 to 50 years. Malaria and syphilis seem to exert an influence in causation. A rather concise classification according to the origin of the cysts is offered by the author as follows:

1. Traumatic cysts (hæmatoma, large unilocular cysts, secondary serous cysts).
2. Infoliation cysts (traumatic or inflammatory inclusions of peritoneum). Small multiple — superficial and deep.
3. Dilation cysts (ectasis of splenic sinuses).
4. Disintegration cysts (arising from arterial degeneration and occlusion or other arterial occlusion, as from emboli, and resulting in infarction and necrosis of parenchyma).
5. Neoplastic types (hæmangioma and lymphangioma).

6. Degeneration cysts (arising from secondary changes in 5).

In forty-three cases in this series the contents were stated to be hæmorrhagic. Seventeen were subcapsular hæmatomata which are usually large, single, and unilocular. Twenty-two were serous cysts; eight of which were small, superficial, and multiple. These occur most commonly on anterior border of spleen, seldom upon the posterior border or convex surface, and rarely upon concave surface. Twelve were lymphatic cysts or lymphangiomas.

Clinically, the most frequently recognized cyst is the large unilocular variety of the hæmorrhagic or serous type containing from one to ten litres. Cysts give no symptoms as result of involvement of splenic tissue *per se*. Large cysts give pressure symptoms and in some cases symptoms arise from adhesions formed about the spleen. Pain of a heavy dragging type, in the left hypochondriac or epigastric region is the most predominant symptom. Gastro-intestinal and respiratory symptoms may result from pressure and be quite marked. The tumor mass is usually located to the left of the umbilicus. Percussion reveals a mass continuous with splenic dullness which may be movable or fixed, smooth, irregular and of doughy or elastic consistency. Fluctuation is not always present. Friction fremitus may be present over splenic area. Ascites is usually absent except in new growths.

The diagnosis is rarely made clinically. A history of trauma, the rapidity of growth, location of mass, and character of pain are most important desiderata. The condition must be differentiated from other splenic enlargements and cysts of other abdominal contents.

Cysts have been treated surgically by (1) puncture, (2) incision and drainage, (3) excision, and by (4) splenectomy. Puncture is a discarded procedure. Incision and drainage as a one or two step procedure has been recorded in fourteen cases. Results were not stated in five cases, seven recovered, and two died. Excision of cyst was practiced six times. Four recovered, one died, and the result was unstated in one.

Fowler has been able to collect twenty-seven cases of splenectomy for cysts. The result was unstated in two cases, one died, and twenty-four recovered.

R. W. MCNEALY.

MISCELLANEOUS

Corner and Cautley: Diagnosis of Acute Abdominal Conditions of Children. *Practitioner*, Lond., 1913, xc, 798. By Surg., Gynec. & Obst.

Corner feels that it is largely the work of the practitioner to diagnose the condition. The work of the surgeon is taken up usually in confirming the opinion of the practitioner. He gives a table comparing the frequency of acute abdominal conditions in children and in adults. The table is produced from 206 cases in children compared with three times as many adults all from the same hospital.

	Children Per cent	Adults Per cent
Acute condition of the appendix.....	44	54
Intestinal obstruction (not including intussusceptions).....	3	28
Intussusceptions.....	47	2
Perforations of the alimentary tract.....	9	9
Gynecological conditions.....	2	2
Peritonitis of other origins.....	3.5	2
Other conditions.....	2.5	3

This table shows the great preponderance of intussusception and appendicitis among the acute abdominal diseases of childhood. Another point of a great deal of importance is that peritonitis of doubtful origin is of more frequent occurrence in children than in adults. Given acute abdominal conditions and a child under 4 years of age, intussusception is most likely to be the cause, while over 4 years appendicitis is the most frequent condition encountered. In children under 4, appendicitis is present in only 18 per cent, while over 4, intussusception is present in only 5 per cent.

Corner has found the presence of enlarged lymphatic glands in the mesentery to be very frequent. He regards them as tuberculous, caused by the bovine type of bacillus. One should not be too hasty in advising operation on children, and rectal examination should never be omitted. C. G. GRULKE.

Jacobæus: Laparo- and Thoracoscopy (Über Laparo- und Thorakoskopie). *Beitr. z. klin. d. Tuberkul.*, 1913, xxv, 2.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has extended the method of cystoscopy of the bladder to the peritoneal and pleural cavities. Laparoscopy is performed with a Nitze cystoscope No. 12 together with a suitable trocar. In the execution a distinction is made between cases with and without ascites. In the former, the fluid must be drained off with a trocar. Filtered or unfiltered air is blown into the cavity until the patient complains, the cystoscope introduced through the trocar and the abdominal cavity inspected. The parietal peritoneum is very sensitive to the touch of the lamp of the cystoscope. In patients without ascites, the direct introduction of a coarse trocar is not possible because of the danger of injury to the intestine. The author finds his way, with a dull puncture needle. The space in the abdominal cavity in patients without ascites is often very small, so that a comprehensive picture of the liver or organs cannot be obtained. In cases without ascites, the author advises against the use of the method owing to injuries to the intestines. Laparoscopy is restricted to examination of superficially placed parts. Therefore this method is of use only in diseases of the liver, peritoneum, and conditions with ascites. The effect of therapy can also be determined to a certain degree. The technique in large, corpulent patients is difficult.

The author examined 69 cases by laparoscopy for diagnosis. The patients presented the following conditions: Cirrhosis of the liver in fourteen, diseases of the liver with picture of Pick's disease in

eight, liver lues in three, congestion of the liver in four, tuberculous peritonitis in six, abdominal tumors in twenty-four, and ten cases of minor interest. The liver changes in cases of cirrhosis of the liver offer no diagnostic difficulties. On the other hand, the changes in the peritoneum are not very easily determined. Gray red or fleshy red color of the liver must be considered. Diagnosis of Pick's disease can be made by laparoscopy with a more or less degree of certainty. In lues of the liver, the method proved of practical value in one case in which it was not clear whether the enlargement of the liver was due to alcohol or a luetic infection. The condition of the lobes indicated lues of the liver. In stasis of the liver the method shows that cirrhosis of the liver is not present judging by the superficial changes. In the six cases of tuberculosis of the peritoneum, the tubercle-like nodules were plainly seen by laparoscopy. An idea of the extent of the tuberculosis was also obtained. In malignant tumors of the abdomen there is no doubt of the findings. Metastatic growths on the intestine, liver and peritoneum are easily recognized. It is more difficult to recognize them in the omentum, especially when it is very fat. In cases in which it is not possible to decide macroscopically if carcinomatous, tuberculous, or luetic changes are present, one cannot expect to do so by laparoscopy.

In thoracoscopy the author uses the same apparatus as in laparoscopy. The skin and pleura must be thoroughly anesthetized beforehand, so that the thoracoscope may be moved without hindrance in all directions. Any pleural exudate is drawn off and replaced by air. Too high an air pressure in the thoracic space should be avoided because of the danger of emphysema of the skin after the completion of thoracoscopy. The point of predilection for the introduction of the trocar is the sixth or seventh intercostal space somewhat median to the anterior axillary line. A certain individualization is necessary; the best point is the line between the exudate and the normal tissue. On directing the thoracoscope upward, one can see almost the entire upper lobe; this is especially possible in cases of complete pneumo-thorax. On examining the parietal wall, a distinct difference is seen between the ribs and the

intercostal spaces. The patient is placed preferably on the sound side with a pillow under the chest. If all of the exudate is not removed, the author introduces a thin catheter alongside the trocar to which he attaches a Potain apparatus to suck it out. In thoracoscopy of the lower part of the thorax, care must be taken not to injure the diaphragm on introducing the stilet of the trocar.

He examined seventy-one cases by thoracoscopy. The following questions seemed to him of particular importance: Is it possible to draw conclusions on the nature of a lesion from the changes seen by thoracoscopy? Is it possible to distinguish between a tuberculous pleurisy and one of any other etiology? In the eleven cases in which a tuberculous pleurisy was shown by other methods (guinea pig injection, X-ray) there was an intense reddening and swelling of the serosa and the difference between the ribs and the intercostal spaces was obliterated. Whether tuberculous nodules could be seen depended upon the kind and the extent of the fibrin formation. However, the author did not discover marked differences between the different kinds of pleuritides, since the changes which were seen in tuberculous pleurisy were also found in non-tuberculous diseases of the pleura. In serous or sero-hæmorrhagic pleuritides the following was found: The tuberculous forms showed an intense reddening of the surface of the pleura with a loss of the difference between the ribs and the intercostal spaces and with formation of layers of fibrin. In acute cases gray white nodules are often seen which can be regarded as tubercles. The more marked the fibrin covering becomes, the more difficult it is to recognize the nodules. Idiopathic pleuritides showed the same appearance in general. Nodules are also present which are very much like the tubercle nodules. In non-tuberculous pleuritides there is a hyperæmia of the surface of the pleura. The difference between the ribs and the intercostal spaces remains; fibrin formation is usually slight; and nodules are not present. In chronic pleuritides the principle point of interest is the question of differentiation between tumor metastasis and chronic inflammatory pleuritis. The author did not find characteristic changes for tuberculosis in cases of empyema.

KOLB.

SURGERY OF THE EXTREMITIES

DISEASES OF BONES, JOINTS, MUSCLES, ETC. GENERAL CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Dumont: *Experimental Contributions to the Pathogenesis of Acute Hæmatogenous Osteomyelitis* (Experimentelle Beiträge zur Pathogenese der akuten hæmatogenen Osteomyelitis). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 116.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Lexer is the first experimenter who successfully produced in rabbits, diseased conditions correspond-

ing in localization and anatomical and clinical symptoms with those of acute suppurative osteomyelitis in man, with any degree of regularity. The weaker bouillon cultures of staphylococcus aureus and albus were injected intravenously or intra-arterially for this purpose. The teachings of Kocher, Rodet, and others claiming a hæmatogenous origin of this disease, were thus placed on a firm basis. His further attempts at determining the blood vessel participation in this process in young bones (these experiments corroborated, and are elaborations of, those of Langer) induced Lexer to

explain the first occurrence of hæmatogenous infections of the bones as follows:

The staphylococci that by their biological characteristics are most inclined to grow in clusters, become walled off in the minutest endarteries of an osteoblastic zone where they multiply and form the first small abscesses. Metastatic abscesses caused by embolic lodgment of separated groups of staphylococci are responsible for some of the multiple foci. The origin of osteomyelitis by actual embolism is very uncommon. Dumont, encouraged by Tavel, studied the theoretically constructed principles of Lexer, by microscopic examinations of serial cases as well as by original experiments. His experimental examinations established the very important fact that only those kinds of staphylococci are virulent in rabbits that are hæmolytic when brought into contact with its blood. The specific "Bacillus osteomyelitis Hencke" is not accepted, as it makes no difference where the staphylococci are obtained — whether from acne pustules, furuncles, or other infections — nor whether they are white or yellow. The author was invariably able, by means of the hæmolytic staphylococci and, according to their quantity and virulence, to produce varying cases of purulent hæmatogenous osteomyelitis. These cases presented all the variations "from the acute foudroyant pyemic form, terminating in death in 24 hours without the development of any osteal foci, to the cases progressing very mildly in which the animals remained alive and there appeared all the symptoms of chronic osteomyelitis with sequestration."

For microscopic examination, the technique of which is given in detail, the femora of ten animals were utilized. These were killed by injections into the veins of the ears at different intervals, of cultures of a diminished virulence. In all cases there were multiple foci; in seven of twenty cases, the foci were in the epiphysis and showed no connection with other parts, hence the assumption of anatomical difficulties in the way of spreading of the processes from the diaphysis to the epiphysis through the cartilaginous structures, was confirmed. In the first 2-4 hours after the injection, the cocci were found in the blood only; after 6 hours, principally in the smallest vessels of the bones; after 15 hours, the vessel walls were broken down and the organisms were found clustered in the adjacent tissues; after 24 hours, the first circulatory and nutritive disturbances were noticed. After that, small-celled infiltrations formed around the clusters of cocci and degenerated into miliary abscesses. The liberations of emboli, as accepted by Lexer, were not found. Lexer's hypotheses were otherwise strengthened and supported by the author's experiments. SIEVERS.

Morison: Injuries to the Semilunar Cartilages of the Knee-Joint. *Clin. J.*, 1913, xlii, 1.

By Surg., Gynec. & Obst.

The author believes the most favorable position of the limb to allow of injury to the semilunar cartilages

is acute flexion of the knee accompanied by a twist in the adducted position; it may occur, however, at the end of forced extension.

Rupture of the cartilage may take place without the severe pain we are accustomed to expect; the pain is not due to the fracture but to the displacement of the fragments between the bones which causes a stretching of the ligaments and a locking of the joint.

"Locking is rare except in extension," yet it may occur during flexion or in both positions, depending upon the location and extent of the rupture. A fracture with displacement of the fragment anterior is apt to produce locking with extension, one with displacement posterior will produce locking in the flexed position while a pedunculated fragment long enough to reach both the anterior and posterior parts of the joint may produce locking which occurs during flexion or extension or both. Swelling of the joint which often occurs within a few hours after the injury is probably due to "traumatic synovitis."

There is often a tender spot over the anterior and inner portion of the joint and more or less wasting of the muscles. Recurrence of the condition from time to time with intervals which are free from any disturbance whatever are points of very great diagnostic importance.

Union of the ruptured cartilages may be facilitated by placing the limb in effective splints for six to eight weeks but after recurrence the proper course is removal of all fragments through a good exposure of the joint.

The operation is one of the most successful in surgery; failure rarely occurs except in those cases where some fragment has been overlooked.

ROBERT B. COFIELD.

Harttung: Contribution on Hysterical Contractures after Accidents (Beitrag zur Lehre der hysterischen Contracturen nach Unfall). *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, Wiesb., 1913, xii, 114.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author gives a detailed account of a contracture of the shoulder-joint after severe injury to the elbow-joint. The author's view coincides with that of Trappe that a hysterical contracture similar to organic disease develops along definite rules, that the primary physiologic fixation of the joint in the position which gave least pain became permanent and pathological under the influence of the hysterical factor. In contradistinction to the healthy person, in whom a normal condition again sets in after healing of the injury and cessation of the pain, the hysterical patient, due to lowered will power, is unable to overcome the sensory irritation or stimulus resulting from the fixation of the joint and its neighboring muscles with the result that the primary physiological reflex contracture develops into a permanent hysterical contracture.

GOEBEL.

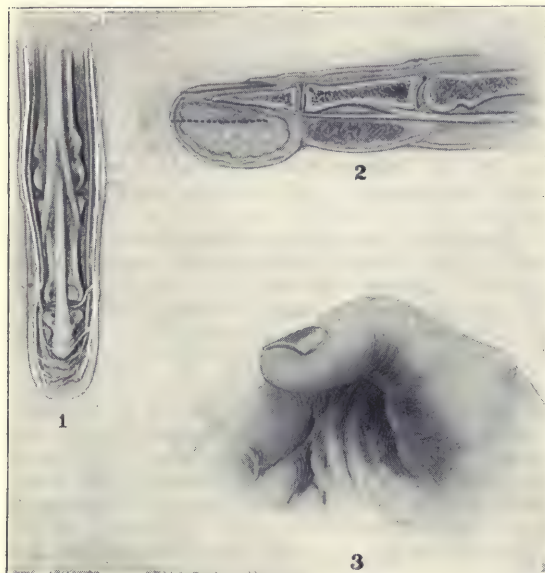


Fig. 1. (Dorrance.) Note distribution of arteries.
 Fig. 2. Connective-tissue space distended with wax under pressure. Dotted line where incision would extend.
 Fig. 3. Line of incision, one half only shown.

Dorrance: Treatment of Felons with Reference to the Pathological Anatomy and Location of Incisions. *J. Am. M. Ass.*, 1913, lx, 1416.

By Surg., Gynec. & Obst.

He defines a felon as an inflammation of a connective tissue space which is situated on the palmar surface of the last phalanx. A space was demonstrated by several dissections of felons and by injecting the space with wax as shown in the cross sections. (Figs. 1 and 2.) The epiphysis of the distal phalanx is supplied by a branch from the digital artery before it enters this space, whereas the diaphysis is supplied by a branch from the distal artery after it enters the space, thus explaining why the epiphysis lives and the diaphysis frequently becomes necrotic.

In felons as in any other connective tissue space such as sub-aponeurotic infection of the scalp or osteomyelitis of the long bone, free and quick drainage is essential. He advises against a longitudinal incision over the pad of the finger as it does not allow free drainage, and has a tendency to close up and requires frequent packing. Kanavel's method of two lateral incisions is superior to the longitudinal incision but does not give the desired quick and free drainage and requires frequent packing. The incision he advises (Fig. 3) starts at the level of the base of the nail on one side and extends in the line of the skin furrows over the tip of the finger, up the opposite side to a point on a level with the beginning of the incision, thus making a flap of the tip of the finger. A piece of rubber tissue is placed in the



Fig. 4. (Dorrance.) Wound after incision. Method of rapidly introducing rubber tissue.

uppermost angle of the wound as shown in Fig. 4. The wound is then dressed with salt solution. The dressings are kept moist and changed every day or so, no packing being required. On about the third day, the rubber tissue will come away and the wound will gradually close. For the first few days the wound will appear to have been larger than was necessary but the final results will quickly dispel any such idea.

FRACTURES AND DISLOCATIONS

Voeckler: Diagnosis and Treatment of Fractures in the Region of the Elbow-Joint (Diagnose und Therapie der Frakturen in der Nähe des Ellbogengelenks). *Med. Klin.*, 1913, ix, 441, 489.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The most important fracture of this region is the supracondylar, which occurs as an extension or a flexion fracture, the latter being considerably less frequent. The supracondylar fracture is easily diagnosed by a break in the axis of the upper arm, the normal location of the olecranon and the location of the lateral and median condyles. It is the fracture of youth and results from a fall upon the extended hand or upon the flexed fore-arm. In cases without dislocation, crepitus and fracture pain are the essential features. The treatment consists in reposition, with or without narcosis, and dressing in hyperflexion in a Kramer splint, or the method of Heusner

(muslin bandage and cast) may be used. Reduction is effected by backward traction on the upper arm and downward traction on the fore-arm, flexing it to a right angle to overcome the shortening. After two to three weeks active and passive motion is begun under the observation of the physician. The fracture of the external condyle is recognized by the local swelling of the joint, by local sensitiveness to pressure, by the mobility of the condyle, and lastly by the cubitus valgus. In this fracture the symmetry of the three points (both condyles and olecranon) is disturbed. The treatment consists in replacing the fragment and the application of a Kramer splint with the arm in right-angled position. If dislocation is marked, extension is to be preferred. If the condyle is rotated 90° or more, it is necessary to spike it or wire it in its normal location. The fracture of the internal epicondyle is diagnosed more easily. Fixation of the arm for 8 to 14 days is the best treatment. The olecranon is fractured usually by direct force and the fragment is drawn upward by the triceps. The arm must be put up in extension to bring the fragments as near as possible to each other. This can be aided by bringing adhesive strips from upper fragment downward, both sides of the arm drawing the fragment nearer. A fracture of the head of the radius is at times difficult to recognize. Painful pronation and supination of the fore-arm, with the hand upon the head of the radius, will confirm the diagnosis. It is best put up in right-angled flexion on a Kramer splint. The splint should remain two weeks in children and three weeks in adults. Active motion may be done at home with safety. The prognosis is good and in spite of the early formation of callus, the result will usually be good.

VORSCHÜTZ.

Barreau: Injuries to the Condylar Cartilages (Über C-Knorpel-Verletzungen). *Beitr. z. klin. Chir.*, 1913, lxxiii, 688.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the mechanism of meniscus injuries and concludes that separation of the semi-lunar cartilages can only occur in normal joints with firm ligaments, and then through forcible rotation of the leg against the femur with simultaneous contraction of the quadriceps muscle. Without this contraction only porous cartilages can be torn from the condyles, and then only by sudden passive extension of the thigh. The greater frequency of injuries of the inner meniscus is due to the habitual outward rotation of the toes.

The diagnosis of injuries of the semi-lunar cartilages is not always easy. The treatment in recent injuries should always be conservative, in older ones operative suture of the cartilage seems of questionable value, and partial resection predisposes to arthritis deformans. The author therefore advises total extirpation of the injured and separated cartilage. A detailed account is given of nine cases treated by operation, among which only one involved the lateral meniscus.

JOSEPH.

Winslow: A Case of Complete Anterior Dislocation of Both Bones of the Fore-arm at the Elbow. *Surg., Gynec. & Obst.*, 1913, xvi, 569.

By Surg., Gynec. & Obst.

This is a case of anterior dislocation at the elbow, occurring in a boy aged 9. As he was carrying a bucket filled with water, he tripped and fell upon his right elbow, producing an anterior dislocation of cubital bones, which was verified by a skiagraphic picture. The fore-arm was somewhat lengthened and semiflexed. The upper end of the radius and ulna was felt in front of the humerus, while the articular surfaces of the humerus were palpated posteriorly. Reduction was effected by acutely flexing the elbow and pushing the bones of the fore-arm strongly downward.

The interest in this case lies chiefly in its rarity, as, according to Stimson, the number of reported observations has not yet reached twenty-five, even including seven cases in which the olecranon process was broken off and remained in place posteriorly. These dislocations usually occur in the young and are frequently compound. They are generally due to a fall upon the acutely flexed elbow, though some cases result from a fall upon the outstretched palm; one case, at least, was due to traction upon the extended fore-arm. Of the cases reported, one died; three were subjected to amputation; and several, being compound, suppurated, resulting in impaired function.

Reduction, probably, is most readily effected by flexing the fore-arm acutely and pushing downward and backward. In some cases reduction has been accomplished by passing a band around the upper end of the fore-arm and pulling downward, while pressure is made on the humerus to force it backward. Reduction has also been effected by bending the flexed fore-arm around the knee of the operator or the arm of an assistant.

SURGERY OF THE BONES, JOINTS, ETC.

Murphy: Arthroplasty. *Ann. Surg.*, Phila., 1913, lvii, 593.

By Surg., Gynec. & Obst.

For clinical purposes ankyloses may be divided into (1) bony; (2) cartilaginous; (3) fibrous; (4) peri-articular, ligamentous, capsular, and (5) extra-articular. The etiology and management of the conditions are taken up in detail. The main principle consists in interposing between the bones, after their separation, some material which will prevent bony union. Various substances have been used, but the best is a pedicled flap of fat and fascia from the tissues in the neighborhood, or if that is not possible, then a flap of fat and fascia from the trochanteric bursal portion of the fascia lata. Next in importance is the restoration of the normal conformation as nearly as possible, in order that the patient will have a useful as well as a movable joint.

In general, the elements which have contributed most to the failures have been (1) insufficient or defective excision of capsule and ligaments; (2)

insufficient interposition of fat and fascia between the bony surfaces; (3) infection; (4) sensitiveness to pain on motion after operation. The interposing material must cover the entire articular surface of the bones, being attached, however, to only one bone.

The technique in the various joints differs, not in principle, but only so far as necessitated by the individual joint.

Murphy has made use of two incisions for exposing the hip joint. The original one was a U-shaped flap about 3 inches wide and 5 inches long, with the base up. The incision begins $1\frac{1}{2}$ inches above the trochanter and 1 inch behind, extends down about 2 inches below the trochanter, passing under and in front of it, then up to a point opposite the commencement, thus placing the trochanter approximately in the center of the U. Another incision is made along the ilio-trochanteric line. It commences about 1 inch below and to the outer side of the trochanter and extends up for about 5 inches in a straight line with the anterior superior spine. These incisions are employed as is demanded by the individual case. The next step is to free the trochanter, leaving its muscles attached to it.

The patella has been handled in four different ways: (1) Interposing a flap from the vastus externus or internus. (2) Splitting it in two from above down, then turning the upper half under the lower, so the smooth aponeurotic surface comes next to the femur. (3) Freeing the vastus attachments to the quadriceps for two inches above the patella; next dislocating the patella from side to side during the operation; when the limb is straightened out and the flap interposed the patella is separated from the overlying skin and fat by blunt scissors dissection up over the quadriceps and down over the ligamentum patellæ to its attachment, a 180° rotation of the patella is made so the upper surface of the patella becomes its articular surface and the prepatellar bursa aids in making a lining for the new joint. The upper surface of the patella is trimmed down with forceps until level. The vasti are now sutured to the opposite sides of the quadriceps tendon, whence they were freed, preventing luxation of the patella. (4) Covering the under surface of the patella and entire articular surface of femur with graft from trochanteric zone of fascia lata, without rotation of patella. Good results are had with all of these, but the rotation method is simplest, and after operation gives additional leverage to quadriceps tendon. It has some disadvantages, as it supports the vitality of the skin flaps.

Since adopting this plan, Murphy encountered cases in which so many operations had been performed that even the capsular flap could not be secured. Then he resorted to the final or third means for securing the interposing flap. After denuding the bone and molding its surfaces, removing as much as necessary to tibia or femur completely to extend the limb, he took a portion of fascia lata and trochanteric bursa from the hip and interposed it en masse, in the knee, sutured it first

to the posterior condyloid portion of the capsule, brought it clear over the anterior surface of the femur and lower surface of the femur and lower surface of patella; accurately sutured it on both sides and both ends, so it covered all of the lower end of femur and prevented bony contact.

Having exposed the joint, made the flaps, and separated the patella, the ankylosis between femur and tibia is also severed by a carpenter's chisel, using both grooved and straight, as may be necessary. Rotation of patella is not always necessary, except when ankylosis is apt to recur.

The author takes up other joints in detail, giving the operative technique.

Prognosis of arthroplasty: 1. Perfectly movable, normally functioning joints with normal sliding and rotary motion can and have been reproduced. 2. A new synovialoid membrane is produced with fluid not synovial, but resembling synovial fluid, and lining cells identical with those lining the hygromata, closely resembling the endothelial cells of normal synovial membrane. 3. These joints support full weight and traction. 4. They are painless once the process of repair is complete. 5. They are not subject to the hematogenous metastatic arthritides of normal joints. 6. A fibrocartilage-like structure develops on the end of the bone, and the latitude of motion increases with time up to the full anatomical limitations in the uncomplicated cases. The production of new joints is not difficult technically, nor is it associated with great danger to life. The many details in the interposition of the flaps are essential, and must be systematically carried out to achieve the best results. Asepsis is essential, though not absolutely necessary.

Murphy has devoted much attention to the prophylaxis of ankylosis. He believes the great majority of cases of ankylosis, the result of a metastatic arthritis ("inflammatory rheumatism" which is initiated with a chill) are avoidable. He is absolutely convinced that the contortion deformities following metastatic arthritis are avoidable. The acute arthritides, and especially those that have an initial chill, are surgical lesions from the very first day. The initial chill is a warning ankylosis probably will occur, therefore the limb must be kept in a good position from the very beginning and the inter-articular pressure by involuntary muscle contraction must be overcome. This is best accomplished by Buck's extension. This not only prevents deformity, but greatly alleviates suffering, and usually prevents the ankylosis. The plaster cast in *acute infections* always favors ankylosis and should never be used. In tuberculosis it favors repair and therefore lessens the likelihood of ankylosis. Extension of *sufficient* weight to overcome the muscular contraction is the ideal means of preventing deformity and avoiding ankylosis.

Murphy's final conclusion with regard to arthroplasty is that where the technique is carried out properly, in a primarily sterile field, the results far exceed his original expectations. They can be secured

uniformly and, when they are not secured, the failure must be charged to some defect in technique or the subsequent management.

L. J. MITCHELL.

Vulpus: Osteoplasty in Pseudo-Arthrosis of the Tibia (Knochenplastik bei Pseudarthrose der Tibia). *Zentralbl. f. chir. u. mechan. Orthop.*, 1913, vii, 127.
By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The treatment of pseudo-arthritis of the tibia has been successful almost without exception, even in the apparently hopeless cases, by uniting both fragments by means of a bridgework made of a petioled lamella of bone and periosteum. Technique: A flexible flap of periosteum plus part of the cortical layer of the subjacent bone is cut with a hook-shaped distal extremity, almost parallel to the long axis of the proximal fragment, beginning immediately above the line of fracture. This is done by means of a chisel. Before turning this flap over into the distal fragment, the latter is prepared as follows: Two periosteal lobes are formed; the larger one is cut obliquely and folded back laterally; the smaller one is a continuation of the larger one at its lower end, and is folded back distally; into the bone thus denuded of its periosteum, a groove is chiseled, corresponding in size and shape to the hook-shaped flap about to be overlapped from the upper fragment of bone; this groove extends to the line of fracture. A similar channel is made in the proximal fragment, extending from the line of fracture to the base of the osteo-periosteal flap described above.

The preparation being finished, the osteo-periosteal flap of the upper bone is laid into this channel, bridging over the two fragments of the fracture, and is then covered by the peripheral periosteal flaps which are fixed over this newly placed tissue. The parts are then immobilized in plaster of Paris for several weeks.

By Röntgen photos, Vulpus demonstrated the coalescence of the flap with its new bed and its gradual growth in situ.

KROH.

Taylor: Restoring Motility After Bony Ankylosis of the Joints. *N. Y. M. J.*, 1913, xcvi, 1113.
By Surg., Gynec. & Obst.

This paper is a continuation of some of the preliminary work previously reported. The author first reviews the literature of operative treatment of bony ankylosis of the joints in detail and brings it down to date. He next mentions the different methods used by all operators for reductions of fragments after bony ankylosis as follows:

1. Brisement forcé.
2. Interposition of foreign non-absorbable substances.
3. Interposition of muscle and fascial flap with nutritive pedicle.
4. Interposition of heterogeneous fascia or membrane.
5. Interposition of autogenous and homogenous fascia or membrane without nutritive pedicle.

6. Interposition of absorbable animal substances.

The author emphasizes the fact that acute and active chronic cases should not be operated upon. After experimentation the author finally hit upon the following mixture as suitable for interposition between joint surfaces after breaking up bony ankylosis. The solution is: one part yellow wax and five parts lanolin, melting at about 130 degrees F. The employment of an excessive amount of wax in the articulation is a mistake, as it may cause such intra-articular pressure that the sutures may open. Only enough should be injected to coat over the eroded bone areas.

Traction by Buck's extension on the lower extremities is useful. One must bear in mind that joints long unused and ankylosed become flat, not rounded, so that if the formation of further ankylosis can be prevented, a useful and functioning joint may be counted upon, according to Wolff's law. A rounded articular surface with progressively increasing range of motion with the improved muscular power can reproduce to a certain extent. In operation, the bones should be fashioned as nearly as possible like the normal articulation; this may be done by chisels and gouges. For the articulation of the femoral head special burrs should be employed. The jig or Gigli saw can only be used when the articular ligaments can be avoided, so as to prevent flail joints. All ligaments, and as much capsule, bone and cartilage as is possible, are to be preserved. A number of cases with histories are next cited, both experimental upon animals and upon patients. These are accompanied by a series of excellent X-ray pictures. The author states that in a number of subsequent operations it was found that patients do better with softer wax mixtures in the proportion of one part of wax to ten of fat.

FREDERICK G. DYAS.

Lexer: Transplantation of Joints Obtained from Cadavers (Transplantation von Leichengelenken). *Deutscher chir. Kong.*, 1913.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Lexer has transplanted joints from cadavers in two cases. In one case infection occurred, and in the second case in which the knee-joint of an executed person was transplanted shortly after death, the function was bad and Lexer performed a secondary resection. The microscopic examination showed necrosis of the bone. It makes little difference whether the transplanted bones are vital or not; the question is are they not so quickly resorbed that their resistance suffers? Homoplastic transplantations give still the best prognosis but failures may occur when the recipient is tuberculous or luetic. The great difficulties in heteroplastic surgery arise from the difference in the albumens of the two individuals. In Lexer's clinic successful experiments are in progress to make heteroplasty possible by a preliminary treatment of the blood serum.

KATZENSTEIN.

Goebel: Replacement of Finger and Toe Phalanges (Ersatz von Finger- und Zehenphalangen). *München. med. Wchnschr.*, 1913, lx, 356.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Following the procedure of Wolff in cases of spina ventosa of a finger phalanx, Goebel replaced the phalanx of the fourth finger in a sixteen-year-old boy by the phalanx of the second toe. Healing followed without reaction. An X-ray picture taken several weeks later showed a well preserved transplant. The functional result also was good. Goebel gives this procedure absolute preference over the transplantation of periosteal joint chips between the epiphyses as recommended by other authors. Goebel points to the early return of the normal functions as of special significance in connection with the success of the transplantation.

REHN.

Küttner: End Results in Transplantation from the Dead and from a Monkey (Dauerresultate der Transplantation aus der Leiche und vom Affen). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author demonstrated two specimens of hip-joint transplantation from the cadaver. In the first case the head of the femur was removed from a corpse, dead thirty-five hours, and implanted into a patient in whom the head and neck of the femur had been removed for chondrosarcoma. The case was demonstrated two years ago. The patient died thirteen months after the transplantation from pulmonary metastases. In the second case, on account of a local recurrence, a disarticulation of the hip-joint had to be done and a transplantation from a corpse three hours after death was used. The findings in both cases were the same; the bone, when examined microscopically, was dead and was slowly being substituted by live bone tissue. Of particular interest was the firm and functionally correct attachment of the musculature to the dead bone. The author also demonstrated a child in whom, on account of a congenital defect of the fibula, he transplanted the fibula of a monkey. The transplanted fibula is completely healed, as is shown by X-ray pictures.

KATZENSTEIN.

Fasano: Primary Muscular Sarcoma and Myomectomy (Sarcome musculaire primitif et myomectomie). *Policlin.*, Roma, 1913, xx, sez. chir., 86.

By Journal de Chirurgie.

After having stated that the occurrence of primary muscular sarcoma is questioned by no one, the author contributes a schematic table showing the rapid development and the particular clinical mani-

festations of this tumor.¹ This is followed by a study of the macro- and microscopic, anatomical and pathological characteristics of these growths. The etiology of these tumors has been, and still is, under discussion. For the most part, the majority of them are covered with a limiting capsule, a fact of extreme importance from the histo-pathological and therapeutic standpoint. It has lately been demonstrated that the capsule should not be considered as a limiting membrane but rather as a zone of invasion and that the macroscopic limitation is microscopically infiltrated. The author claims that it is necessary to perform more radical operations without limiting one's self, as has been proposed, to removing the growth only. The operator should take into consideration the possibility that the tumor has broken through the limiting membrane and invaded the surrounding tissue. It is also essential that no deep metastases be allowed to remain.

In the following chapter the author reviews a number of cases of muscular sarcoma treated by radical myomectomy. The following are some of his personal observations: A child ten years of age had had, for 6 or 7 months, a tumor the size of a small nut which occupied the external and anterior portion of the left thigh. For the past 2 months, this little tumor had become painful to the touch while in the past few days it had increased to the size of a hen's egg. This circumscribed, smooth, non-fluctuating tumor, immobilized by the fixation of the thigh muscles, was rendered mobile with the complete relaxation of these muscles. The overlying skin was normal and unattached; no glandular enlargement was perceptible. The diagnosis of primary muscular sarcoma was made. After having crossed the superficial tissues and aponeurosis, the tumor rested in the deep anterior portion of the thigh and it could be removed only by sacrificing the neighboring muscular structures. Seen two years later, the little patient was in perfect health in every way, moving the limb freely and walking normally. Microscopically the tumor consisted of oval-shaped fibers and was limited by a capsule of muscular fibers. Histologically it was composed of small round cells which at the periphery infiltrated the surrounding tissues in various places.

In conclusion the author states the various observations published demonstrate that, in a case of primary muscular sarcoma, radical myomectomy with extensive removal of the neighboring muscles not only does away with the grave after-results, but also gives good functional results; and permits of a lasting union such as cannot be obtained by the radical operations formerly practiced. A. BOSSET.

ORTHOPEDIC SURGERY

DISEASES AND DEFORMITIES OF THE SPINE

Rothmann: The Present and Future of Spinal Cord Surgery (Gegenwart und Zukunft der Rückenmarkschirurgie). *Berl. klin. Wchnschr.*, 1913, 1, 528.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Rothmann has collected twenty-one cases of operations on the spinal cord from literature, although the first operation was performed in 1907. Twelve of these were for intra-medullary tumors, three for extra-medullary tumors which had penetrated the spinal cord secondarily, two for foreign bodies (bullets) in the spinal cord and four for circumscribed foci of various kinds (one tuberculosis, two cysts, one hæmorrhagic). Four patients died; in five there was no particular clinical result; in twelve cases the results were good. He sets forth theoretic considerations for spinal operations: The loss of the posterior columns of the cord can be remedied functionally with comparative ease. The gray substance in one or two spinal segments may be destroyed extensively without causing any other disturbance than local paresis and atrophies in muscle regions supplied by them. Only the fourth cervical segment is excepted on account of its relation to the phrenic centers. Even with destruction of the posterior columns, gray substance and anterior columns in man, we may count on conduction through the lateral columns, if the lateral pyramidal columns are intact, making it possible to stand and walk and transmit pressure, pain and temperature sensations.

The destruction of one lateral column through two or three spinal segments causes a paralysis of the extremity on the same side, which, especially in the leg, may cause marked atrophy. It also causes an increase in the pain and temperature sensation in the opposite extremity. There is little chance of restitution to normal functions. According to this, we may venture to operate on foci localized centrally as well as laterally. Moreover, he advances the possibility of treating spastic contractures by cutting the posterior columns; unbearable pain by cutting the crossed antero-lateral tracts; athetosis by cutting the lateral pyramidal tracts. The active participation of a neurologist is essential in these operations.

WREDE.

Ranzi: Surgery of the Spinal Cord (Rückenmarkschirurgie). *Deutscher chir. Kong.*, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Of five extra-medullary tumors, three were cured, one was improved, and one died. Two intra-medullary tumors were cured. The prognosis is bad in vertebral tumors and hopeless in cancer, of which there were five cases, with three deaths and two improvements. The suspected tumor was not found in five cases, twice a circumscribed meningitis serosa complicated the operation. Three times

decompression was undertaken, once without any benefit, once with temporary improvement, and again with permanent good results. In five cases of fracture of the spinal column, the recently recommended early operation was performed, the results being rather unsatisfactory. It had no good effect in two cases of spondylitis. Sixteen operations were performed on fifteen patients for spasm. In spasm of the lower extremities, four successful results were obtained out of six cases, less favorable results were seen in spasm of the upper extremities, and none in athetosis. In a case of gastric crises, in which double vagotomy had already been performed in vain, Foerster's operation had just as little effect. Altogether in forty cases, there were thirteen deaths, five from the operation, two from meningitis, the latter brought about by incontinence of urine.

Where improvement or cure occurred it took place gradually and was apparent only after a long time. Operations were performed only on one side under general anæsthesia. Only a very small opening should be made in the dura, in order to guard against a sudden decrease in the intra-medullary pressure. For the same reason the operation should be performed in Trendelenburg position. The extra-dural sections of the roots as recommended by Guleke offer greater technical difficulties than Foerster's original operation, yet it is a decided advance. The prognosis in spinal cord operations is better than in brain surgery. Four cases have remained permanently cured after periods of from two to five and one half years.

Becker gives a case history in which he recommends puncture with a fine syringe instead of section of the spinal cord.

KATZENSTEIN.

Nasta: The Treatment of Tabetic Gastric Crises by Foerster-Guleke Operation (L'opération de Foerster-Guleke dans le traitement des crises gastriques tabétiques). *Revista de chir.*, 1913, 1, 20.
By Journal de Chirurgie.

Nasta reports a case of a man 38 years old who entered the hospital because of very severe gastric crises, eighteen months duration. Pain and vomiting had become more and more intense and frequent and no treatment had any effect. On admission the pains were chiefly in the epigastric region, radiating along the base of the thorax which seemed to be pressed as in a vise. There was marked pyrosis and during the crises vomiting was almost constant night and day. Between the crises there were remissions of several days duration, during which the patient was moderately comfortable, but the pains during the crises were so severe that 15 to 20 centigrams of morphine a day was not sufficient to quiet them. They were augmented by pressure in the epigastric region. The patient, moreover, suffered with pain in the spine, between the fifth and twelfth dorsal vertebrae. The pupils were contracted and

did not react to light. Romberg's sign was present. The patellar reflex could not be obtained.

The patient was operated in January, 1913, under spinal anesthesia with strychnine and stovaine. Extradural resection of the posterior roots of the sixth, seventh and eighth dorsal segments was performed. The operation lasted three-quarters of an hour, at the end the patient complained of severe burning pains in the lower extremities. The following night he was comfortable. There was no longer any sense of constriction in the epigastrium and he was able to breathe quietly. There was no pain nor vomiting, and on the ninth day he went home. A month later, the patient's condition was very satisfactory. He had suffered with none of the previous symptoms since leaving the hospital, outside of a few burning sensations causing slight inconvenience. There was a diminution of sensibility anteriorly about the umbilicus and the breast, and posteriorly between the sixth and tenth dorsal vertebrae.

Five weeks after the operation the patient again began to suffer pain beneath the umbilicus, though this was scarcely comparable with his previous suffering. There was no vomiting and no sense of thoracic pressure. Apparently an insufficient number of roots had been resected. M. GUIBÉ.

MALFORMATIONS AND DEFORMITIES

Thomas: Report of a Case of Total Congenital Absence of the Femur. *Cleveland M. J.*, 1913, xii, 321. By Surg., Gynec. & Obst.

The author reports an unusual anomaly — a total absence of the femur (phocomelie) in an infant of three months, born of a syphilitic mother. The child showed signs of congenital syphilis a few days after birth which readily responded to treatment. Shortening of the leg was quite noticeable from the beginning, because of which an X-ray picture was taken revealing the anomaly. CHARLES M. JACOBS.

Hannock: Talipes Equinus Deformity. *Am. J. Surg.*, 1913, xxvii, 194. By Surg., Gynec. & Obst.

The article is a description of the author's method of employing kangaroo tendon as suture material, in nine cases of talipes equinus. In patients over eight years of age, Hannock lengthens the tendon by means of an inverted "L" incision in the tendo achilles and uses twenty-day kangaroo tendon to quilt the edges of the tendon from above downward, in place of ordinary paraffin silk. The advantages of this material are its tensile strength and absorbability. PAUL P. SWETT.

SURGERY OF THE NERVOUS SYSTEM

Eden: The Treatment of Tendo- and Neurolysis with Transplantations of Fatty Tissue (Tendo- und Neurolysis mit Fettplastik). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the Lexer clinic fat was used in six cases of tendo- and neurolysis to cover the defect. The tendolysis was due to a secondary cicatrization of the extensor tendons and a complete functional result was obtained by transplanting fat to make up the defect. Among the four cases of neurolysis one case was not re-examined and the other was operated only four weeks ago. Of the two remaining cases one was a median nerve paresis due to salvarsan injection and the other a radial paresis due to fracture of the radius. In both cases the nerve was liberated from the scar and surrounded with fat, resulting in complete cure of the paresis.

HAYWARD, in discussion, reports four cases of fat transplantations from the Bier clinic. They were cases of partial or complete removal of the mamma on account of benign tumors, in which the defect was replaced by autoplasmic transplantations of fat. The cosmetic result was good. KATZENSTEIN.

Foerster: The Indications and Results of the Excision of Posterior Spinal Nerve Roots in Men. *Surg., Gynec. & Obst.*, 1913, xvi, 463.

By Surg., Gynec. & Obst.

The first indication for excision of the posterior spinal nerve roots, according to Foerster, is based

upon the physiological function of the same, as conductors of sensibility, and by violent neuralgic pains which defy other methods of relief. He reports 44 cases under this heading, with the following results: 12 successful, 23 failures, and 2 results unknown. In the majority of cases the failure was due to not having excised enough roots. In cases of tabes with severe lightning pains he proved that for a continuous relief of pain a great number of roots must be cut. Exceptions are seen only in those cases in which a localized affection of one or a few single roots can with certainty be stated.

The second indication for resection is the visceral, especially the gastric, crises in tabes. In this group he reported 64 cases; 56 were successful, 2 failures, and 6 died. The cause of the more or less imperfect result was attributed to failure in radical root resection, due to the difficulty in recognizing and isolating them from the spinal cord, owing to concomitant arachnitis. In some cases relapse is due not to failure of radical resection, but to irritation of blood flowing during the operation into the net of the arachnoidæ.

The third indication for resection is spasticity and spastic paralysis due to disease of the cortico-spinal path, especially the pyramidal tract. Of this group Foerster collected 159; 14 died, thus making a mortality of 8.8 per cent. He gives in detail several case reports showing remarkable improvement following resection. Aside from this condition, resection of posterior roots has also been recommended

for some other motor disturbances, especially athetosis. The results in the cases were mostly bad, as the condition depends not upon an increased afflux of sensory stimuli to the gray matter of the spinal cord, but to an increased afflux of motor impulses proceeding from middle brain and carried by motor paths to anterior spinal horns. Leriche has divided some posterior cervical roots in a case of Parkinson's disease, with, as he says, a satisfactory result.

After reviewing the cases he enumerates the single indications and contra-indications for resection of posterior roots in spastic paralysis. First, the morbid process must be stationary, or progressing very slowly. Secondly, we must bear in mind that the resection of the posterior roots relieves only the spastic symptoms, but not the paralysis, therefore a

certain residue of the innervating pyramidal fibres must be conserved, or else the spastic paralysis is transformed into a flaccid one. Thirdly, after the root resection and the return of voluntary mobility, a long and very careful exercise treatment is necessary, by which alone locomotion is gradually gained. Fourthly, the disappearance of the spasticity after the root resection, taking place with the certainty of experiment, is the best proof of the sensory origin of the spastic contracture. But a certain degree of spasm sometimes returns, owing to the fact that the spinal gray matter is gradually recharged by the remaining posterior roots.

In conclusion he recommends the use of electrical apparatus for stimulation in distinguishing between the anterior and posterior roots.

R. W. McNEALY.

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

Scholtz: The Treatment of Lupus (Die Behandlung des Lupus). *Ztschr. f. ärztl. Fortbild.*, 1913, x, 193.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

For the successful treatment of all cases of lupus great care and patience are fundamental. To these even the brilliant success of the Finsen Institute is largely due. Less expensive, though more complicated, methods are followed by equally good results. When possible excision, followed by suture, is the method of choice. Under good technical conditions the defect may be covered by a plastic flap. The size and location of the area alone determine the limits of the method, whereas Finsen rays have no effect upon the small nodules surrounded by hard scar tissue, upon rapidly hypertrophic types and upon those affecting certain areas of mucous membrane. The curette and Paquelin cautery alone are not sufficient and the same is true of the hot-air treatment advocated by Hollander. Regarding the value of the diathermic treatment, no definite statement can as yet be made. It seems, however, to a certain degree to select the diseased tissue. This applies even more strongly to the tuberculin, light and Röntgen-ray treatments, as well as to the application of the caustic ointments of arsenic, salvarsan, neosalvarsan, resorcin and above all of pyrogallate. The remote effects are treated with advantage by Röntgen-rays or radium. Tuberculin, caustics, light and Röntgen-rays produce results on lupus tissue by setting up inflammatory or necrotic processes. Chemotherapy (salvarsan and copper lecethin injections) seem to produce beneficial results. Severe cases always call for a combination of methods, and in the selection of the proper combination lies the secret of success. The author usually pursues the following course: Tuberculin injections followed by quartz-rays with compression. After the inflammatory phenomena subside, tuberculin is

again injected, and pyrogallate ointment applied. When the eschar separates, quartz-rays at a distance of 20 cm. are used. When the reaction from this has subsided, Röntgen-rays are applied, followed by pyrogallate ointment. Then follow quartz- and Röntgen-rays again and, when the skin has healed, it may be necessary to use the Finsen-rays. During the whole course of treatment tuberculin injections are given regularly at intervals of 5-8 days and in large doses.

HARRASS.

Wiener: Skin Grafting Without Dressings. *J. Am. M. Ass.*, 1913, lx, 1526.

By Surg., Gynec. & Obst.

The author directs attention to the great advantage of dispensing with dressings after skin grafting.

Wiener's technique is as follows: The grafts are cut as thin as possible and applied in the usual manner; any discharging sinus is packed with gauze and the packing renewed whenever it becomes saturated. On the first or second day crusts of inspissated serum form between the grafts. These should not be removed and for at least a week no dressing of any kind is applied. The grafts become adherent after the first day or two and assume a healthy pink color. On the seventh or eighth day the entire grafted area is covered with a weak ichthyol ointment. Under this the crusts between the grafts fall off and the grafted area soon assumes a normal appearance. It is not advisable to apply any wet dressing until at least two weeks after the grafting. If applied sooner the grafts may macerate and lose their vitality. In grafting the extremities, the limb is swung free of the bed-clothes. In grafting the trunk, a cradle to keep off the bed-clothes is all that is needed. The results from this method of grafting, even in the most difficult cases, have been far superior to those obtained with dressings.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESSSES, ETC.

Lissauer: Recent Investigations on Tumors (Neuere Arbeiten über Geschwülste). *Med. Klin.*, 1913, ix, 420.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Roman reports three cases of chloro-myelogenous leucæmia with green discoloration of the affected glands, leucæmic infiltrations and nodules. Warstat cites a case of myeloma of the dorsal vertebræ ("plasmacellulares myelom"). Herzog reports a case of intestinal carcinoma associated with tuberculosis which histologically could be shown to have favored the carcinomatous development. The author accepts the idea that the determining factor in the development of carcinoma lies in the primary transformation of the epithelium. Bahre gives an example of the occurrence of carcinoma with syphilis, citing a case in which an epithelioma of the lip developed on the base of a syphilitic ulcer. Miloslavich and Namba describe a case of carcinoma of the appendix which is of interest for the reason that the epithelial proliferation extended into the mesenteric omentum. These authors consider these tumors genuine carcinoma which existed primarily and in which the inflammatory processes are of later development. Rothacker reports a papillary cyst of the ovary with independent carcinomatous and sarcomatous development.

Von Lamezan concludes from a series of experiments on rabbits by injection of sudan oil that the epithelial proliferations demonstrated by Fischer have nothing in common with carcinoma. Strauch was able after having produced carcinoma by transplantation in mice to prove microscopically that multiple metastases had occurred such as are only found in cases of spontaneously developing tumors. Hanke likewise supports the analogy between carcinoma of mice and man on the ground that there are numerous metastatic growths and an infiltration with both the inoculated and spontaneous carcinoma. Simmonds contributes a case of tumor of the thymus gland. Tumors of this organ are carcinoma, sarcoma or thymoma, as demonstrated by the Hassall granules in the metastases. The author concludes with quotations from the statistics of Theilhaber on the mortality of cancer in Berlin, and of Peiper on the occurrence of malignant tumors in the German colonies.

VON GRAFF.

Bristol: Newer Ideas Concerning the Problem of Cancer Etiology. *Med. Rec.*, 1913, lxxxiii, 787.

By Surg., Gynec. & Obst.

The older theories of neoplasia are first reviewed and criticised, then the most recent facts and theories are brought out, and at the same time new and original ideas on the subject are suggested. The following criticisms are made on the various theories:

(a) Cohnheims's: Does not explain the origin of all tumors, nor the reason for, or the stimulus to, a sudden division of the cell "rests."

(b) Ribbert's, von Hausman's and Adami's: Do not show the causes for the sudden change from the normal to the abnormal.

(c) Hauser's: Deals too much with heredity and does not explain those tumors following injuries or irritations.

(d) Oertel's: Does not explain why certain cells proliferate in a malignant manner, nor have the two orders of chromatin in the cell nucleus been proven. In the parasitic theory, while practically every form of micro-organism has been accused, none has been satisfactorily proved, although any may be a predisposing cause of precancerous cell degeneration. All theories fail to explain the cause or causes of cancer and other growths.

The author from studies of a year and a half advances a biochemical hypothesis as the cause of neoplasms. Primarily some form of cell or tissue degeneration is necessary and is due to one of two groups of factors: 1. Interference with the blood supply or nutrition. 2. (a) Mechanical; (b) chemical; (c) physical; (d) parasitical; (e) functional disturbances. This is the primary "precancerous" stage. Secondly, these primary areas show a strong affinity for certain inorganic blood salts and a marked change in their chemistry and metabolism. This is a secondary "precancerous" stage.

The investigations of Ringer and Soeb; Moore, Roaf and Whitely; Ross and Cropper and Carrel are cited as showing that by slightly altering the tension, alkalinity or inorganic salt content of a tissue medium, a sudden stimulus may be given to its growth. Carrel is also quoted as showing that normal connective tissue growth, in vitro, may be accelerated three to forty times by extracts and juices of tissues. The author then states that normal cell reproduction is due to a fixed ratio between the salts in the blood, lymph and tissues, and an intact chemical structure of the cell. May it not be possible, he asks, that a disturbance of these factors would result in an atypical growth in the locality involved.

McClendon, Mitchell and Lillie are quoted as finding that increased cell growth metabolism and oxidation may also be due, primarily, to increased permeability of the cell membrane. All these cell characteristics, i. e. growth, metabolism, oxidation, and permeability, may be accelerated by a change in amount of inorganic salt content or of — OH ions in the medium. In pathological conditions there is a definite affinity between dead and dying tissue and certain inorganic blood salts, especially magnesium and calcium, which gradually increases the local salt content, and, due to this influence, the neighboring cells become more permeable and absorptive, thus growing faster and proliferating more, as com-

pared to other parts of the body. No specific substance or exciter has been defined, though Ross of London suggests various ones. Calkins, Bullock and Rohdenburg also bear this out. The action of inorganic salts in stimulating cell growth is shown by Webb and Mann to be due to their electrolytic property.

Of the fats in the cell, lecithin and cholesterol mainly influence the growth. Abderhalden, Bain, Robertson and Burnett are cited to this effect. The possibility of enzymic action as accelerating cell growth should be taken into consideration. Carrel showed the similarity between tissue extracts and enzymes. Rous's work on "chicken sarcoma" is quoted as bearing on the possibility of a chemical substance influencing cell growth.

In adapting these theories to the cancer problem the author states that it is the site of greatest irritation and cell death that shows the most likelihood to malignancy; i. e., uterus, stomach, breast, and skin. The questions of sex and age incidence of cancer may be explained on these same grounds; i. e., the uterus and breasts, being subjected to greater activities, are more liable to pathological changes; and that old age is the greatest time of degeneration of tissues and upset cellular chemical equilibrium. The influence of heredity is indefinite, but may be explained by "precancerous" environment or a transmission of "precancerous" conditions of susceptibility and metabolism. The rate of growth and malignancy of a tumor would depend as much upon the tissue involved as upon the stimulus to increased growth; i. e. epithelial and connective tissue cells grow faster than muscle, nerve, or bone cells. Metastases are due to direct transportation of cells from origin by blood or lymph aided by lessened general or local tissue resistance.

The symptoms of malignancy are explained by the absorption by the tumor cells of the food and salts in the blood and lymph to the detriment of the other tissues. Likewise the inability of these latter to give off their waste products results in more or less autointoxication.

P. M. CHASE.

Lambert: Comparative Studies upon Cancer Cells and Normal Cells. II. The Character of Growth in Vitro with Special Reference to Cell Division. *J. Exp. M.*, 1913, xvii, 499.

By Surg., Gynec. & Obst.

Lambert presents his observations on the general character of growth in vitro of transplantable rat sarcoma and of normal connective tissue cells. The latter cells were grown from small pieces of blood vessel. It was found that in primary cultures sarcoma cells exhibit a much greater activity than do normal connective tissue cells; there is a shorter latent period; amoeboid phenomena are more marked; and cell multiplication proceeds more rapidly. Sarcoma cells are less active in secondary cultures, while connective tissue cells show a markedly accelerated growth. Connective tissue cells are more easily grown over long periods in vitro than

are sarcoma cells; they multiply rapidly in cultures over three months old.

Atypical mitoses of several kinds are found in cultures of sarcoma cells, but are not seen in growths of connective tissue. The time required for division in rat connective tissue cells at body temperature varies within narrow limits (20 to 50 min.); sarcoma cells exhibit marked variations and several hours may be required. Amitotic division has not been observed in either normal or tumor tissue. Evidences of nuclear budding, however, with the formation of cells containing several nuclei of irregular size have been noted.

JAMES F. CHURCHILL.

Sutton: Mycetoma in America. *J. Am. M. Ass.*, 1913, lx, 1339.

By Surg., Gynec. & Obst.

Sutton adds to the literature of five previously reported cases of Madura foot in America, two which have recently been under observation in Kansas City. He presents in full the case histories with photographs of the lesions. Both patients were in the habit of living active outdoor lives in a sub-tropical country; one a male native of Mexico, the other a female native resident of Texas.

In a statistical study of one hundred cases of mycetoma, Bocarro found that 91 spent the greater portion of their time barefoot in the open air. Eight were females, seven being the wives of agriculturists. The disease occurred most frequently between the ages of 21 and 40. Bocarro found that the causative organism most frequently gained entrance through the wound left by a thorn prick. The disease usually affects the feet though other exposed parts were attacked.

Clinically mycetoma may be divided into three varieties, the yellow or ochroid, the black and the red, so named because of the color of the small masses or granules suspended in the oily, seropurulent discharge from the sinus. The ochroid is the most common type while the red is exceedingly rare. It is probable that all types of mycetoma are due to streptothrix infection, but whether all forms are caused by an infection with the same organism, or whether more than one species plays a part in the disease, can not at this time be stated positively.

L. G. DWAN.

Crile: The Identity of Cause of Aseptic Wound Fever and So-Called Post-Operative Hyperthyroidism and Their Prevention. *Ann. Surg.*, Phila., 1913, lvii, 648.

By Surg., Gynec. & Obst.

In this article the author again emphasizes the importance of exclusion of harmful psychical and traumatic stimuli in operative work for which he previously coined the name "anoci-association."

He concludes from his observations that the rise of temperature and pulse rate in aseptic wound fever and post-operative hyperthyroidism are the result of the conversion of energy into heat as a part of the activation of the brain, hence all of the body, by the psychic and traumatic stimuli.

The fundamental principle upon which he bases

his conclusions is: That the entire mechanism of animals is motor, that all functions are motor and that the energy intended to be utilized in a motor act may in part be converted into heat. Under anoci-association the threshold stimulus is ever kept so high that the common harmful traumatic or physical stimuli are excluded and speedier convalescence assured.

R. W. McNEALY.

SERA, VACCINES, AND FERMENTS

Austrian: Hypersensitiveness to Tuberculo-Protein and to Tuberculin. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 141. By Surg., Gynec. & Obst.

A great deal has been published concerning hypersensitiveness to bacterial proteins, and from the data in the literature several facts seem established. Animals can be actively sensitized with dead bacteria, or with the extracts of them. The hypersensitive state is transmitted from mother to young. A refractory state is readily induced, and, in general, sensitization due to bacterial proteins obeys the same laws as does sensitization due to any other protein. Further, the symptoms resulting when a sensitized guinea pig is given an intoxicating dose of the homologous bacterial protein are in kind the same as those seen in hypersensitiveness to serum.

However, striking as is the similarity of the phenomena developing after sensitization with serum, and with proteins of bacterial origin, one apparent difference is to be noted. The injection of horse serum into a series of guinea pigs leads to the development of a state in which the animal is so sensitive that a second dose, properly administered, causes, in the majority of instances, acute lethal shock, whereas experiments published concerning hypersensitiveness to bacterial proteins give the impression that sensitization here is much less constant and much less intense.

The author cites a few of the more important articles on this phase of the subject which actually illustrate these points, and then, using several strains of tubercle bacilli of the human type, he conducts a series of experiments on animals, which clearly demonstrate that preliminary treatment of guinea pigs with "O. T. Protein," "A. F. Protein" or with "Tuberculo-Protein" causes the development of hypersensitiveness to "A. F. Protein" and to "Tuberculo-Protein."

This, the author states, is sufficient evidence to prove the general assumption concerning the identity of the essential protein of tuberculin used to demonstrate the reaction in man, with the tuberculo-protein shown to produce classical hypersensitiveness in animals. The demonstration of this fact justifies the application of the data obtained in the experiments on animals with tuberculo-protein to the interpretation of the phenomenon known as the tuberculin reaction.

Wolff-Eisner, v. Pirquet, Baldwin, Krause, Hamman, Wolman and many others regard this phenomenon as a manifestation of hypersensitiveness to

tuberculin. For this view the presumptive evidence is strong. The facts which support this hypothesis may be briefly summarized as follows: All the manifestations of typical hypersensitiveness to protein can be produced in guinea pigs by treatment with aqueous extracts of tubercle bacilli. Guinea pigs can be sensitized with albumose-free tuberculin and with old tuberculin that has been freed of glycerin and made poor in salts. And sensitization with any of these products causes the animal to react to injections of the others.

Hypersensitiveness to tuberculin develops within seven to fifteen days after infection with the B. tuberculosis. Tuberculous animals can occasionally be intoxicated with tuberculo-protein, developing symptoms of hypersensitiveness. The passive transference of hypersensitiveness from a tuberculous man to normal guinea pigs has been successfully accomplished and positive results have likewise been obtained when the serum of a sensitized animal has been injected into an untreated one. The type of the reaction symptoms and the development of them in an infected host after the administration of minimum doses of tuberculin are likewise suggestive facts. This evidence justifies the interpretation of the tuberculin reaction as a manifestation of true hypersensitiveness. GEORGE E. BELBY.

BLOOD

Heimann: The Relations of the Thymus and Ovary to the Blood Picture (Über die Beziehungen von Thymus und Ovarium zum Blutbild). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Heimann investigated the changes in the blood picture, particularly the variations in the number of small lymphocytes, in disturbances of the glands of internal secretion, especially of the ovaries. The investigations of Klose, Liesegang and Lampe on the relations of ovary and thymus to the blood picture are interesting.

The thymus elaborates substances which increase the number of lymphocytes; the ovary, however, elaborates substances which decrease their number. Lymphocyte counts were made in a large number of women who had disturbances of internal secretions (amenorrhœa, metrorrhagia and women in the climacterium). In all these it was shown that a decrease in lymphocytes existed with an increased ovarian secretion, whereas in cases with decreased ovarian secretion the percentage of lymphocytes was much greater. The hypothesis was later corroborated with animal experiments. The ovaries or the thymus were first extirpated, followed by later injections of extracts of the organs, and the effect noted.

Soresi: Hæmorrhagic Conditions of Children. *Arch. Pediat.*, 1913, xxx, 252.

By Surg., Gynec. & Obst.

The principle thing brought out in this article is a new apparatus consisting of two hollow tubes

through which vessels are drawn, then turned back and held in place by small hooks attached to the tubes. The connection is made between the external jugular and the superficial vein of the forearm. The apparatus is so constructed that two ends of the vessels will be brought together and held in place by means of the apparatus alone.

C. G. GRULEE.

Popielski: Remedial Agents Which Specifically Check Coagulation and Decrease the Blood Pressure in the Female Genitalia (Über die spezifischen gerinnungshemmenden und blutdruckherabsetzenden Substanzen des weiblichen Genitalapparates). *Biochem. Ztschr.*, 1913, xlix, 168.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Popielski attacks the work of Schickele in which a specific action of checking coagulation and decreasing blood pressure is attributed to uterine and ovarian extracts, because the same results may be obtained with other organic extracts. The arrest of coagulation is not caused by uterine or ovarian hormones but by the acid reaction of the extracts used in the investigation. The injection of uterine or ovarian extracts into the blood stream does not show any action different from that of other organic extracts. The action of all of these is the same in producing decreased blood pressure and loss of coagulability. This behavior is produced by a substance which Popielski found chemically and named vasodilatin.

BOXER.

Leale: Thrombophlebitis of the External Iliac Vein. *J. Am. M. Ass.*, 1913, lx, 1523.

By Surg., Gynec. & Obst.

Leale considers particularly the symptomatology and differential diagnosis and reports a case complicating typhoid fever. The great relative frequency of thrombophlebitis of the left leg can be explained by the tendency to obstruction of the left external and common iliac veins by the left common iliac and external iliac arteries and particularly the left internal iliac artery as it arches around the fifth lumbar vertebra and intervertebral disk.

Thrombophlebitis in any vein is usually due to a bacteriæmia or toxæmia resulting from the surgical infections or infectious diseases. In most cases a constriction of the vessel-wall is needed to bring about thrombus formation even in the presence of a bacteriæmia.

Palpation will at times reveal the thrombosed external iliac vein in the space running upward, inward and backward from a point a little to the inner side of the middle of Poupart's ligament, passing over the brim of the pelvis to a point at the lumbosacral articulation and opposite the sacro-iliac joint.

The earliest and most helpful sign in diagnosis of this condition is the peculiar, rapid, steplike rise in the pulse which often mounts to a considerable height.

L. G. DWAN.

Enderlen: Thrombosis of the Portal Vein Following the Effect of Blunt Force to the Abdomen (Thrombose der Pfortader nach Einwirkung stumpfer Gewalt auf das Abdomen). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 726.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports a case of this rare affection (only six cases have been reported). The patient was brought to the clinic three and one half months after the injury, suffering from symptoms which were diagnosed as due to duodenal ulcer. A laparotomy, however, did not confirm the diagnosis; nothing pathological could be found. The patient died one and one half months after. Autopsy: in the right lobe of the liver was found a concentric laminated thrombus the size of a fist, situated partially within the right portal branch and reaching to the main vessel.

In regard to the treatment of portal thrombosis it seems more rational to the author to perform an anastomosis between the portal vein and the renal vein than to perform the Talma operation.

KNOKE.

Ottenberg, Kaliski, and Friedman: Experimental, Agglutinative, and Hæmolytic Transfusions. *J. Med. Research*, 1913, xxviii, 141.

By Surg., Gynec. & Obst.

These authors have attempted by a series of experiments to determine what would happen if hæmolytic or agglutinative blood was transfused directly between two animals of the same species. As yet their work is incomplete and does not lead to final conclusions, but still presents a number of interesting facts. By a suitable technique, isoagglutination and isohæmolysis can be demonstrated to occur between the bloods of different dogs. Isoagglutinins occur naturally, and it is possible that the immune isoagglutinins produced by von Dungern and Hirschfeld are merely intensifications of these. No sharp grouping could, however, be made out in the naturally occurring agglutinins. Natural (as distinguished from immune) isoagglutination is, however, a relatively weak phenomenon.

The direct transfusion of blood, whose red cells can be agglutinated and laked by the recipient's serum, is followed by destruction of the transfused blood with an intense intoxication. It is not yet clear whether agglutination plays any part in this result, or whether it is due entirely to hæmolysis.

A very remarkable blood-picture, presenting many of the morphological forms peculiar to pernicious anæmia, is produced when the blood of another animal of the same species is destroyed in the circulation. In the authors' experiments this was not due to anæmia, as the animals' own blood was not destroyed, and there was no reason to believe they were anæmic. The changes must have been due to some peculiar toxic effect, on the bone-marrow, of hæmolytic blood destruction.

GEORGE E. BEILBY.

BLOOD AND LYMPH VESSELS

Ballin: Cirroid Aneurism of the Hand. *J. Mich. St. M. Soc.*, 1913, xii, 265. By Surg., Gynec. & Obst.

The author reports the case of a steam-fitter who, on August 11, 1911, tried to stop a sliding steel casing with his right hand. His hand was hyperextended at the carpal joint by the great force and he felt a sharp pain. The next day the veins on the dorsum of the injured hand were very much swollen. A few weeks later some of these veins were considered varicose and were excised, but the swelling returned immediately, accompanied by profuse perspiration and intolerable pain.

Pulsation of the swollen hypothenar was noticed on April 3d, 1912. Diagnosis of aneurism of the superficial end-branch of the ulnar artery with a venous communication was made. At operation, April 10, a sac, formed by a blood vessel, three inches long was removed. The wound healed by first intention, the patient remaining well until May 3, when the symptoms returned. On May 13 the end-branch of the radial artery was ligated and relief from the pain lasted for four weeks only. On June 10 a communicating branch of the radial vein between the first and second metacarpal bones was ligated. On the 25th, an excision of the blood vessels and veins with ligature of the dilated veins on the volar side was performed. On July 20 and August 31 two more ligatures were applied, but the relief in each case was only temporary. Finally, the little finger with the whole metacarpus was removed. Still the dilated veins persisted and the superficial vein above the elbow became enlarged. An angiosarcoma was naturally expected, but microscopy of the removed finger showed no malignancy. After a few weeks all the distressing symptoms were obvious. The necessity of an amputation of the forearm became imperative. The patient recovered and is well at the present time, having gained twenty pounds since the removal of the painful condition.

The pathological findings showed that the vessels had greatly dilated lumina and much thickened walls. The vascular changes are chronic, probably congenital, and the condition developed after trauma, as has been observed in a number of cases of this rather rare and interesting condition.

EDWARD L. CORNELL.

Haythorn: Tuberculosis of the Large Arteries with the Report of a Case of Tuberculous Aneurism of the Right Common Iliac Artery. *J. Am. M. Ass.*, 1913, ix, 1413.

By Surg., Gynec. & Obst.

Tuberculous lesions of the vascular system have long been of interest as points of distribution of bacilli in cases of general miliary tuberculosis. The case reported is of interest because of its rarity and because it gave rise to the presence of great numbers of tubercle bacilli in a few glomeruli in the kidney where they caused little or no reaction in the tissue

about them. The absence of inflammatory reaction in the kidney probably indicates that the patient had reached a stage in which his system of defense was so exhausted that it could no longer react against the stimulus of the toxins.

Four general types of tuberculous lesions of the aorta and its main branches have been described:

1. Miliary tuberculosis of the intima.
2. Polypi of tuberculous tissue attached to the intima.
3. Tuberculosis of the wall, involving the several layers.
4. Aneurisms, the walls of which are composed of tuberculous tissue.

Haythorn's case belongs in Group 4.

L. G. DWAN.

Ferrarini: Primary Tumors of the Vascular Sheaths (Sur les tumeurs primitives des gains vasculaires). *Clin. chir.*, 1913, xxi, 589.

By Journal de Chirurgie.

The two classic memoirs on tumors of the vascular sheaths are the pioneer works of Langenbeck, 1861, and that of Reynault, 1887. Since the appearance of the last of these, certain new growths have been eliminated from the classification of primary tumors of the sheaths, such as bronchial epitheliomas, whose pathogenesis is very individual, and also sarcomas and lymphosarcomas in the neck whose origin is from lymph glands. Since this reduction, König has expressed doubt as to the existence of primary tumors of the vascular sheaths, and Jordan also denies their occurrence. The latter believes the term should be dropped, since he considers that they are all secondary. Ferrarini demonstrates the legitimacy of the original classification. He believes in the existence of primary tumors of the vascular sheaths which have definite characteristics, which allow them to be differentiated from an anatomical or clinical point of view. He presents three personal cases, a lipoma of the carotid sheath, a fibrosarcoma of the femoral sheath, and a lipoma of the femoral sheath. In each case operation showed that the tumor was provided with a thin capsule which was in no way continuous with the aponeurosis of the neighboring muscles, and that the tumor, moreover, had developed in the center of the vasculo-nervous bundle whose elements were dissociated by it.

The author has studied the anatomy of normal vascular sheaths and has cleared up certain widely accepted errors. The vasculo-nervous bundle possesses, as a whole, a fibrous sheath; within this, each element — artery, vein and nerve — possesses an independent sheath of connective tissue. The spaces between the common outer sheath and these individual sheaths is filled by a loosely woven tissue rich in fat and containing many lymphatic channels. He believes that the connective tissue partitions, described in such detail by certain authors, are artifacts or purely imaginary. These conclusions are supported by histological preparations, illustrations of which are given.

From the literature Farrarini has gathered a score of cases in which fibromas, myxomas, lipomas, sarcomas, and endotheliomas have definitely arisen in the constitutive elements of the vascular sheaths. Farrarini accepts the characteristics of these tumors, described by Reynault: 1. Tumors of the vascular sheaths are characterized by their anatomical site in a region occupied by a large vascular bundle. 2. They are fixed when the vascular bundle has a strong sheath, as is usually the case, but when, as in the neck, the sheath is delicate, they are somewhat mobile. 3. These tumors frequently possess prolongations which then occur along the axis of the vascular bundle. 4. Usually the vessels are not displaced and the arterial pulsations are felt over the surface of the tumor or transmitted through it. 5. Circulatory disturbances are frequent and occur early. None of these signs are pathognomonic and definite diagnosis can hence only be made when at operation it is found necessary to incise the common vascular sheath in order to reach the tumor. In such cases it will usually be found that the point of origin of the tumor is from the individual sheath of one of the vessels lying within the common sheath.

PIERRE FREDET.

Wieting: Cold Gangrene Due to Vascular Paralysis (Gefäßparalytische Kältegangrän). *Zentralbl. f. Chir.*, 1913, xl, 593.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author had occasion to observe a number of cases of gangrene of the toes due to freezing during the Balkan war. Etiologically, the most important factor in the production is prolonged exposure to cold and lowered resistance of the tissues, due to general and local influences, such as insufficient food, dysentery, cholera, and neglect of the feet. Although most of the cases developed immediately, nevertheless there were cases which did not develop until six to ten days after the onset of an enteritis or a dysentery. He does not believe the gangrene is due to thrombosis, but to vascular changes following prolonged exposure to cold in weakened individuals. As proof of this contention the author states that as soon as the general conditions, especially nutrition, were improved, the number of gangrene cases dropped considerably. After a detailed discussion of the clinical phenomena he concludes that the important factor of the disease is the vascular paresis due to injury of the nerve supply of the vascular structures leading to thrombosis. In regard to treatment he advises to act conservatively. Further observations along these lines will be detailed later in an extensive monograph.

KNOKE.

Neuhof: Experimental Ligation of the Portal Vein; Its Application to the Treatment of Suppurative Pylephlebitis. *Surg., Gynec. & Obst.*, 1913, xvi, 481.

By Surg., Gynec. & Obst.

The author attributes the belief that there "is no surgery of the portal vein" to the fact that ligation of

this vein in animal experiments has regularly led to death in a very short time. This was first demonstrated by Oré in 1856, and has been repeated by Schiff, Claude Bernard and others. Death in this experiment has been attributed to different causes. Claude Bernard thought it was due to an acute anæmia, and Schiff to a cessation of liver function. The author cites evidence that neither of these views is the correct one, and from the symptoms and post-mortem examination of animals in which the vein was ligated, the conclusion was reached that death (which always took place in fifty to ninety minutes after the ligation) was due to shock. Solowiewf is credited with demonstrating that the portal vein could be entirely occluded, if at successive operations the branches were ligated singly, and the author describes experiments which confirm this work. It was also demonstrated that successful ligation could be accomplished by gradual occlusion at successive operations. The collateral circulation in each case developed very quickly, mainly in the gastro-hepatic omentum, and such collateral circulation, being "hepatopetal," preserves the liver function.

The article is concluded by some general remarks on the practical application of this knowledge to the treatment of suppurative pylephlebitis. Case reports are quoted showing that complete occlusion of the portal vein in man is at times compatible with good health. The great danger of suppurative pylephlebitis, which is almost universally a fatal disease, is attributed to extension of the infection into the liver. This would be prevented by portal vein ligation and the author suggests such a procedure as the treatment. As to whether the ligation should be done at once or in successive stages, the author is inclined to believe that in at least those cases which are most likely to come to operation, that is, those having existed for some time, the collateral circulation is perhaps well enough established to permit a complete ligation. Even in those in which the thrombotic process has extended above the highest accessible surgical level, the author suggests the possibility of benefit following ligation through the thrombus owing to the fact that such would at least greatly diminish the area of the source of infection. Omentopexy should be combined with the ligation for the reason that it offers an additional possibility of collateral circulation.

BARNEY BROOKS.

Joshinaga: The Etiology and Preventive Inoculation of Elephantiasis (Über die Ursache und Schutzimpfung der Elephantiasis). *Ken-Yo-Kai-Zasshi*, 1913, No. 109.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Elephantiasis (arabum) is found endemically on the Japanese coast and on many of the islands. It also occurs endemically on the western coast of Shikoku. Each case develops after repeated attacks of erysipelas. The geographical distribution of elephantiasis does not coincide with that of filariasis

in Japan. Among elephantiasis patients the author was able to demonstrate only twenty-seven per cent filaria carriers. Filariasis is an accidental complication of elephantiasis, and may predispose to the latter disease. Among 4,500 elephantiasis patients, the author regularly found a strain of streptococci, which are not pathogenic for guinea-pigs and rabbits but which after subcutaneous inoculation into the human regularly produced a typical attack of erysipelas within six to twenty-two hours. Agglutination of these streptococci occurred with 1-500 diluted serum of elephantiasis patients. They are found only in the peripheral blood between the second and sixth day after the attack and are never found in the arterial or venous blood during the quiescent stage. A week after the attack they cannot be found at all. They produce first a dermatitis, lymphanginitis, later lymph stasis with œdema, and after repeated infection a thickening of the skin.

The author prepared a vaccine for preventive inoculation by exposing a pure culture to 53° C. on two different occasions for an hour and gave one million cocci at a dose. The inoculation was repeated three to six times with a ten day interval. Immediately after inoculation the phagocytic action of the leucocyte is reduced, but is increased two to three times after ten days. As a rule, the action is proportional to the number of inoculations. The author considers three inoculations sufficient. Immunity was still present in sixty-three per cent of the cases after one year and in twenty-six per cent after three years. The erysipelas attacks ceased, thickening of the skin did not occur and retrogression of the already thickened skin set in. An immune serum of a treated goat cured all symptoms of the attack within two to six hours, using 10 cc. for an injection.

OYAMA.

Ewing: Endothelioma of Lymph Nodes. *J. Med. Research*, 1913, xxviii, 11. By Surg., Gynec. & Obst.

Ewing states that for many years he has been encountering tumors of lymph nodes in subjects presenting no other demonstrable tumor and with whom the subsequent course indicated that no other tumor existed, and in which the structure strongly suggested an endothelial origin. The observation of several tumors of this class within the past year which presented early states and transitional forms between those previously observed has led him to the conclusion that endothelioma of lymph nodes is a rather common neoplasm, that it is usually classed with lymphosarcoma on the one hand and with secondary carcinoma on the other, that the process differs in many histological, anatomical and clinical features from secondary carcinoma, and that it is usually possible to recognize these features with considerable or complete certainty.

The author reports eleven cases in support of his contention. These comprise clinically a great variety of diagnoses, and upon a study of them he

bases the following conclusions: Extreme grades of endothelial hyperplasia are not infrequently associated with and dependent upon granulomatous infection of lymph nodes, and these cases demonstrate the capacity of endothelium to respond to inflammatory irritation with extensive proliferation. In some cases it is difficult or impossible to determine whether this overgrowth is simply inflammatory or independent of the irritant, autonomous, and neoplastic. The long continued effects of a granulomatous infection may lead to neoplastic growth of lymphatic endothelium, and in the course of a granulomatous infection of lymph nodes, after repeated operations, the granulomatous element may be eliminated and the disease progress as a form of neoplasm. Granulomatous infection of lymph nodes may very early give rise to excessive overgrowth of endothelium of distinctly anaplastic type, and with local aggressive properties.

Such malignant endotheliomas may arise without any evidences of an associated granuloma. It is possible to conceive that an original infectious focus may be overgrown and obscured by the neoplastic cells. No definite evidence of such an event has been secured, but it has been shown that one node of a chain may exhibit purely neoplastic overgrowth while others show chiefly granuloma. Certain endotheliomas of lymph nodes designated as diffuse, plexiform, perivascular, or alveolar, are probably derived from the endothelium of lymph sinuses and lymph cords. Certain primary tumors of lymph nodes, with or without associated granuloma, are probably derived from the reticulum cells of the follicles. These tumors resemble lymphosarcoma with large cells, and may be distinguished from tumors of small lymphocytes. Endothelioma of lymph nodes differs from other neoplasms in several particulars, and may be regarded as a disease *sui generis*, although essentially neoplastic.

GEORGE E. BEILBY.

POISONS

Stroebel: The Micrococcus Tetragenous as a Cause of Bacteræmia in the Human (Der Micrococcus tetragenus als Erreger von Bakteriæmien beim Menschen). *Beitr. z. klin. Chir.*, 1913, lxxxi, 718. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After a short review of literature which shows that this organism not only acts in symbiosis with other bacteria, but may also alone cause a disease, even a sepsis, the author describes a case of tetragenous sepsis with rare phenomena. A 26 year old male patient with an old empyema fistula was suddenly taken ill with general symptoms, and swelling of several joints. The joint involvement was transient, migrating quickly from one joint to another, and also involving the thorax. Hemorrhagic extravasations occurred in the face and skin of the body. Fever up to 39° was present, with marked remissions. After a course of four weeks, gradual recovery set in, a nephritis, however, persisting.

Blood cultures made on three different occasions showed a pure culture of micrococcus tetragenous. Stroebe is of the same opinion as Heims, that the organism is a pathogenic sarcinia. The primary focus probably was in the empyema fistula, although it was impossible to cultivate a pure culture from the fistula.

FROMME.

Thies: Treatment of Acute Surgical Infections with Rhythmical Hyperæmia (Behandlung akuter chirurgischer Infektionen mit rhythmischer Stauung). *Deutscher chir. Kong.*, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On physiological grounds Thies recommends, in acute inflammations, an interrupted passive hyperæmia for 1 to 2 minutes followed by equal periods of rest, instead of the continuous hyperæmia, recommended by Bier, for the greater part of a day. This "rhythmical" hyperæmia is made with an apparatus patterned after the Perthes continuous hyperæmia apparatus. With this any desired rhythm can be attained. The method has the following advantages over Bier's: the rhythmical application may be applied for several days without long interruptions. With an intensive, long-continued hyperæmia the œdema is not strong enough to interfere with the hyperæmia. The extremity always remains warm. Obviously the endothelial cells of the capillaries are spared, as they always come in contact with fresh blood; therefore, they are more equal to the task of binding the toxins. There is no "stauungsfieber," which is often observed after loosening the binder.

"Rhythmical" hyperæmia may also be used in patients with sensory disturbances, and in small children it may be used for several days. The method was of good service in a series of cases of acute inflammations.

SURGICAL THERAPEUTICS

Vorschütz: The Treatment of Septic Processes by the Administration of Alkalies (Behandlung septischer Prozesse durch Darreichung von Alkalien). *Deutscher chir. Kong.*, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The administration of alkalies in septic processes to combat the body acids liberated, and on the basis of their physiologic action, was undertaken a good many years ago at the surgical clinic of Geheimrat Tilmann. They were given in large doses in all pus cases, 10-20 gm. to adults and 5-10 gm. to children. To prove the clinical observations and the theory promulgated, by Ehrlich, as far back as 1890 (that the bactericidal power of the blood is dependent on its salts) the author acidified the blood of guinea pigs with 50 cc. of a one-tenth hydrochloric acid solution and then injected a quantity of ricin. By this method it was shown that the acidified blood was not able to fix the same quantity of poison as the normal blood. If the acidity was neutralized with alkalies, the animals remained alive. The

favorable action is to be attributed (1) to their catalytic action; (2) to their retention of water in the tissues; (3) to their action upon the kidneys, causing an increased secretion; (4) by causing a profuse glandular secretion, thus increasing the appetite; (5) to their raising of the blood pressure.

Von Brunn: On the Value of Peristaltin in the After-Treatment of Laparotomy Patients (Über den Wert des Peristaltins für die Nachbehandlung Bauchoperierter). *Zentralbl. f. Chir.*, 1913, xl, 431.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Peristaltin is made from the bark of rhamnus purshiana and produces rapid and painless resumption of peristalsis after abdominal operations and is especially recommended as a prophylactic following such operations. The dose is 1.5 gm. subcutaneously, to be repeated if necessary in ten to twelve hours.

KINDL.

Magnus: The Treatment of Wounds with Sugar (Wundbehandlung mit Zucker). *München. med. Wchnschr.*, 1913, lx, 406.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

According to the experiments of the author, sugar as such or in concentrated solution has shown itself to be bacteriacidal and a preventive of putrefaction in the treatment of infected wounds. The antiseptic power is due especially to the peculiarity of the sugar in abstracting water from the tissues. As a result of this bathing with serum, the wound cleans itself of micro-organisms and deposits of fibrin and is placed under more favorable conditions for healing. This is shown by healthy granulations and the rapid formation of epithelium. Tuberculous inflammations cannot be treated by this method.

GENEWEIN.

Hill: Report on the Use of Pituitary Extract in Surgical Shock. *Boston M. & S. J.*, 1913, clxviii, 720.
By Surg., Gynec. & Obst.

After briefly describing the symptoms of shock the author states that he has used pituitrin in about eight hundred abdominal operations. He states that as the essential factor in producing shock is the collection of blood in the splanchnic vessels with a resulting drop in blood pressure, a drug should be used to combat it which will raise the blood pressure. Pituitrin produces a marked effect on the blood pressure in patients who have undergone operation. He gives a chart of a typical case which shows that the blood pressure at the beginning of operation was 105 which dropped to 80 a short time after the abdomen was opened, where it remained almost throughout the operation. His procedure is as follows: An injection of pituitrin is given before the patient leaves the operating table, usually before the abdominal wound is closed; 10 or 15 minims is the usual dose. This is repeated every three hours for four doses if necessary. In the case quoted above 15 minims were injected before the abdomen was closed and the blood pressure increased to 85 and then to

90 within a short time. When this point was reached another injection of 10 minims was given and 45 minutes later the blood pressure registered 110. The pulse rate dropped in proportion to the increase in blood pressure. No evidence of shock was noticed although the operation was somewhat prolonged owing to the amount of work done.

In this series of cases no instance occurred in which there was a symptom of shock. In two or three cases, however, a condition simulating "heart exhaustion" was noted. Whether or not this apparent exhaustion was due to over-stimulation is a question. Many other factors may have been responsible. These symptoms were only transient, the patient responding to stimulation after the administration of pituitrin was discontinued and in each instance the patient made an uneventful recovery. Another result was noted in most of the cases; it appears that pituitrin has a very marked effect on the muscular coat of the intestine, causing an increase in peristalsis and facilitating the passage of gas. This result has also been noted by other investigators.

EDWARD L. CORNELL.

SURGICAL ANATOMY

Hessert: Some Observations on the Anatomy of the Inguinal Region, with Special Reference to the Absence of the Conjoined Tendon.
Surg., Gynec. & Obst., 1913, xvi, 565.

By Surg., Gynec. & Obst.

In the prevailing textbooks on anatomy the conjoined tendon is described but not accorded much prominence. Here and there it is stated that the tendon may be absent, which creates the impression that such an anomaly is rare and of no practical importance. The author claims that absence or maldevelopment of the conjoined tendon is more common than has been supposed, and that the matter is of practical importance especially in its bearing on the technique of hernia operations.

The condition is undoubtedly congenital and the tendon may be either thin and poorly defined, or it may be absent altogether, which is more commonly the case. In this event the fibers of the internal oblique and transversalis pass directly inward toward the edge of the rectus without forming any tendinous union, and are inserted high up on its sheath. The muscles and fasciæ of this region are also often found attenuated and poorly developed. A triangle is formed with its apex at the internal ring and its sides formed by the internal oblique and transversalis muscles and Poupart's ligament respectively; the base is formed by the edge of the rectus. The floor of this area is formed by the transversalis fascia only, which makes it a very weak spot, and predisposes to the formation of direct herniæ. The author has repeatedly demonstrated the condition clinically before verification by operation. A typical Bassini operation is impossible in such cases for the reason that there is no conjoined tendon. In cases of high insertion of the internal

oblique and transversalis, these muscles cannot be sutured to Poupart's ligament without creating too much tension. The operation which best meets the indications in the great majority of cases is the Andrew operation. The Bloodgood operation may be employed in extreme cases.

ELECTROLOGY

Sticker: The Employment of Radium in Surgery
(Die Anwendung des Radiums in der Chirurgie).
Arch. f. physikal. Med. u. med. Techn., 1913, vii, 182.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The action of radium differs from that of the Röntgen rays. Weak preparations of radium, applied only for a short time, cause acute inflammatory irritation of the tissues. In tumors this irritation affects the connective tissues first, but after some time the tumor cells are visibly injured. Stronger preparations applied over a prolonged period cause a distinct degeneration of the tumor cells almost from the start. Operable neoplasms were kept in an operable condition in cases in which the operation had to be postponed. Many inoperable cases were converted into operable ones. Advanced inoperable tumors were temporarily improved by partially preventing their further growth. In cases of carcinoma of mucous surfaces radium-carbenzyme preparations were effective; also, the combination of radium-ray with unipolar electricity was efficacious. Superficial skin carcinomata are especially susceptible to radium therapy. Nævi, papillomata, lupus erythematoses were painlessly removed, leaving small cicatrices. Multiple lymphomata disappeared rapidly when subjected to this treatment.

GRASHEY.

Béclère and Mériel: The Use of Radiography in Surgical Affections of the Stomach and Intestines (L'exploration radiographique dans les affections chirurgicales de l'estomac et de l'intestin).
25 Cong. d. l'Ass. Fran. d. Chir., 1912, Oct.

By Journal de Chirurgie.

The use of radiography as a diagnostic aid in surgical affections of the stomach and intestines has made remarkable progress during the last few years. It is indispensable, in order to obtain an outline of the shape of intra-abdominal segments of the digestive tube, to make them more transparent or more opaque. Gaseous distention of the stomach makes this organ transparent; opaque substances are employed, such as salts of bismuth. Large quantities of these salts must be taken (for a meal 30 grams, for an enema 100 grams). The examination must be made in the upright posture. There are several other valuable methods—that of bismuth and lycopodium of Leven and Barret, of doubly gelatinized capsules of Kästle, of Schwarz' fibrodermic capsules. For enemata, gummy water is the vehicle for bismuth, barium sulphate, etc. Oil can also be used as a vehicle.

Radioscopy and radiography may be used con-

jointly. Stereoscopic radiography is of especial value for the large intestines. Radiography in series presents great advantages, and the polygrams recommended by Levy-Dorn (successive sittings every five seconds) give valuable information. The shade of the internal outline of the digestive cavity furnishes information concerning the topography, morphology, and motility of the different segments of the digestive tract.

Radiology of the stomach. The normal image of the stomach does not correspond to that given in text-books of anatomy; and it is important that one should know the different forms it may assume, as well as how to measure its total height and determine the location of the pylorus, to appreciate the degree of gastric distention. Radiographical examination reveals topographical anomalies of the stomach, displacements of the stomach secondary to hypertrophy or other pathological conditions of neighboring organs.

Radiography shows morphological anomalies of the stomach, either of dimensions (lengthened, dilated, or retracted stomach) or of shape (lacunar, bilocular stomach, diverticular stomach). Radioscopic examination enables one to study disturbances of gastric tonicity, of gastric contractility (peristaltic, atonic, hypertonic) or of fatigue; antiperistalsis, circular spasms, disturbances in evacuation, pyloric insufficiency.

Radiographic examination gives valuable diagnostic information in simple ulcer of the stomach and in cancer of the stomach. Every patient in whom a cancer of the stomach is suspected should be submitted to examination by the X-rays. Pyloric stenosis is perfectly revealed by radiology.

Radiology of the intestines. Radiography furnishes valuable information in the following pathological duodenal states: displacement, ptosis, ulceration, spasm, and especially in stenosis. The principal signs of duodenal stenosis are abnormal lasting distention on the side proximal to the stenosis and visible persisting duodenal peristalsis while the distention lasts. The duodenum has the shape of a sausage, the length of which is determined by the seat of the stenosis. The first radiologic observations upon the jejunum and ileum were those of Rieder, Herz, and Schwarz, etc. When the intestine is diseased, radiology is of service to diagnose ptosis, atony, and stenosis, especially of the ileum. Stenosis reveals itself by a syndrome, composed of three signs: abnormal stagnation of the contents of the ileum, abnormal widening of the gut lumen, and the typical aspect of hydrogaseous collections, making the intestinal loops look like the pipes of an organ. This aspect of organ pipes, filled at different levels with perpetually unstable gas and liquids, is characteristic. For the large intestines, enemata are recommended. After injections, the colon dilates and sacculation becomes evident, giving an image resembling a string of dried figs. The examination of the cæcum, 12 to 16 hours after the bismuth meal, with the patient successively in the right and left

lateral decubitus, allows us to verify the existence of the following conditions: cæcum mobile, abnormal dilatation of the cæcum, ileo-cæcal tuberculosus. The radiograph shows the location of the appendix and the possible presence in its interior of faecal concretions and of foreign bodies.

After gastro-enterostomy one should not neglect the use of X-rays. It gives precise information, especially concerning the function of the pylorus.

HARTMANN believes the X-ray plates may show the typical picture of a non-existing stenosis. The bismuth enema, in particular, may provoke spasms and may become fragmented by gases and give upon the photographic plate the image of strictures. Upon the screen one must follow the progression of the bismuth, make repeated examinations, and diagnose stenosis only when tenderness is present at the point of accumulation and immobilization of the bismuth.

We must avoid errors of interpretation with the X-rays. We must not forsake other methods of clinical investigation. The radiographic image of violent gastric peristalsis is easily interpreted in favor of pyloric stenosis. Tabes can give the same picture, less the gastric dilatation. X-rays must not increase the number of tabetic patients operated upon for so-called stomachic conditions. In certain cases clinical examination may help us to verify a diagnosis of suspected ulcer where the radiographic image taken with patient in the upright posture appears normal. If, however, we examine our patient in a right lateral position or in a head low position, or if we increase the amount of bismuth porridge to about 600 grams, we will easily discover the signs of an ulcer. This is also true of cancer in the upper portion of the stomach. The stomach should be absolutely empty previous to the ingestion of bismuth porridge.

There are always some patients whose stomachs show in the radiograph a more or less complete biloculation, and still at the time of operation one does not detect the slightest notch of the greater curvature. These cases of spasmodic biloculation of the stomach are a frequent source of error.

Passing to the large intestine, the radiographic image of which is certainly more difficult to interpret than that of the stomach, DE QUERVAIN thinks we must not attach too much importance to bismuth enemata, especially as concerns the diagnosis of the shape and position of the intestine. The bismuth enema creates absolutely abnormal conditions, and the images which result therefrom are caricatures of the large intestines. He shows a sketch representing the large intestine of the same patient — one after the ingestion of the bismuth porridge, the other after the bismuth enema. In certain cases, radiographic examination alone will furnish a precise diagnosis, more exact than all the other methods combined. There are other cases, and they form the large majority, in which the diagnosis can be established only by considering all the clinical data.

J. DUMONT.

GYNECOLOGY

UTERUS

Kjægaard: Investigations of the Endometrium; the Histological Changes Incident to Benign Affections of the Endometrium Corporis (Endometrie Undersøgelser; de Histologiske forandringer ved benigne lidelser af endometrium corporis). *Kjøbenhavn*. 1913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author investigated thoroughly the endometrium of 211 patients. The cyclic changes were essentially the same as described by Hitschmann and Adler. The author divides the pathological conditions in the following groups: (1) Endometritis chronica et subchronica; (2) hypertrophia irregularis glandularis; (3) subinvolutio mucosa menstr.; (4) hyperplasia gland. simplex; (5) polypus. He attaches considerable significance to the hypertrophia irregularis glandularis and attempts to differentiate it from the other forms as clearly as is possible. In this group the glands, which normally belong to definite periods of the cycle, appear in various shapes, side by side; likewise, gland projections are found. The etiological factor of this form is not inflammation. The cause must be looked for in other organs, especially the ovaries. These patients present fairly constant clinical phenomena; hæmorrhages are irregular, prolonged, recur usually immediately after a curettage, even after repeated curettment, or after a period of amenorrhea. The recognition of these changes indicates treatment other than curettment. This disease occurs most frequently between the ages of 35 and 45. On the strength of the gland projections no diagnosis can be made, as these occur also associated with myomata and in older women.

The subinvolutio mucosa menstrualis is characterized by the fact that the pre-postmenstrual changes commence abnormally late (8-10 days or more after the onset of menstruation), so that premenstrual forms of glands are found alongside of post-menstrual changes. These patients always have more or less prolonged irregular bleeding. Here also the etiological factor more probably lies in the ovaries rather than in the mucosa. After curettment, several patients had no recurrence, whereas in others abnormal bleeding soon occurred again. The author puts those cases in which the mucosa is regular and undergoes the normal cyclic changes but in which the abnormality consists of quantitative differences in the group of hyperplasia gland. simplex. The border-line between the normal pathological tissue is difficultly placed. The presence of invaginations is usually artificial. If the mucous membrane of a freshly extirpated uterus is curetted over one-half of the organ, and the other

half examined with its attached muscular layer, then the invaginations are found only in the curetted portion of the mucosa. Actual papillæ are found but rarely in benign curettings.

Polyps are recognized best macroscopically, as the only wound surface corresponds to the pedicle. Microscopically one can detect occasionally the antecedents of polyps. The endometritis chronica and subchronica is best recognized by the presence of plasma cells, some of which may occur without any other signs of inflammation. Some cases can be recognized by the presence of round cell infiltration without any plasma cells. The normal follicle-like groups of cells lying in the deeper mucous membrane must not be confused with a pathological round cell infiltration. In contradistinction, the pathological infiltrations are more diffuse with gland cells lying between the lymphocytes. The increase of spindle and connective tissue cells is a less important sign of inflammation on account of the variability of the individual quantity, and because they may be increased from other causes, as in atrophy. The thesis closes with a large number of clinical histories, accompanied with a carefully detailed microscopic description of the mucous membrane and the necessary proof of the contentions raised. Finally, there are a number of drawings and micro-photographs illustrating the pathological changes discussed.

GAMMELTOFT.

Sudakoff: The Blood Vessels of the Uterus during the Menopause (Die Blutgefäße des Uterus in Menopause). *J. akush. i. jensk. bolez.*, St. Petersburg, 1913, xxviii, 589.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Sudakoff examined the uteri of fifteen women between the ages of 42 and 82, who died at least one year after the onset of the menopause of diseases in no direct relation to the sexual organs. The most striking picture is the dilated lumen of blood vessels which increases with the age of the woman. This is due to the gradual disappearance of the muscular elements of the vessel. Of the latter, only single fibers remain; the others have gradually been replaced by elastic and connective tissue. The circular and longitudinal fibers encroach upon the lumen like tufted elevations, and serve to keep it closed. The endothelium and intima are fairly well preserved. Calcification of the vessel wall is relatively rare. The author concurs with others that the sclerosis of the uterine vessels is not dependent on the general arterial sclerosis, but is dependent upon pregnancy and its results. The vessels are frequently so placed that one appears to be pushed into the lumen of the other. Goodall explains this phenom-

enon as due to the formation of new blood vessels in the old ones after a pregnancy. In a young uterus the old vessel wall may disappear entirely and the new vessel alone remains, whereas in older women the degeneration of the old vessel wall occurs only partially.

GINSBURG.

Rawls: Cancer of the Uterus. *Med. Rec.*, 1913, lxxxiii, 892.
By Surg., Gynec. & Obst.

After some general remarks on cancer, the author discusses the treatment of uterine cancer in particular. The study of cancer has become an exact experimental science and a specific will be found even before its etiology is understood. He reviews the statistics from many countries showing a general increase in cancer mortality. About 4 per cent of gynecological cases have carcinoma. He claims that childbearing as a whole does not seem to have the direct etiological bearing which is ascribed to it. He quotes the census of 1900 to substantiate his claims, which showed that the deaths from all causes in women between the ages of 45 and 54 show a ratio between the married and single of 7 to 1 and from cancer of 7.5 to 1. He makes the following statements concerning the treatment: There is no specific and the only means of combating this widespread disease is early diagnosis and immediate operation. Cancer at some time in its development is a local condition and a radical removal will result in a cure. But its early symptoms are atypical and many physical, chemical and serological tests have been proposed for an early and correct diagnosis, as yet unreliable. The subjective and objective symptoms must still be depended upon for an early diagnosis. He then discusses the three cardinal symptoms of cancer (hæmorrhage, pain, foul leucorrhœa) and concludes that, after all, the only real means of making an early diagnosis is by a microscopic examination of tissues removed by curettage or excision.

The best operative procedure for cancer is still in dispute. The extended abdominal operation as done by Wertheim or the extended vaginal operation as performed by Schauta are now the operations which in the greatest number of cases give the best "absolute accomplishments." He cites European and American statistics of the operability and cures. In conclusion he refers to Winter's efforts to get cancer cases at an early stage by enlightening physicians, midwives and the general public through a publicity campaign. He advocates the earnest adoption of this plan for the United States.

HENRY SCHMITZ.

Peterson: The Present Status of the Radical Abdominal Operation for Cancer of the Uterus. *Surg., Gynec. & Obst.*, 1913, xvi, 561.
By Surg., Gynec. & Obst.

The author believes that the unpopularity among American surgeons of the radical abdominal operation for cancer of the uterus is due to the high primary mortality. If all reported and unreported

cases could be collected, a fair estimate of the primary mortality would be between twenty and fifty per cent. The author recognizes that two conditions must be brought about before the operation under discussion will be generally adopted. First, the profession and laity must be so educated regarding uterine cancer that the disease will be recognized earlier and patients come to the surgeon when local and general conditions combine to bring about a low primary mortality. Second, for this particular operation, true specialization must result, so that the occasional operator will be eliminated.

The backwardness of the medical profession in inaugurating a campaign against carcinoma is explained by the firmly fixed idea that cancer is hopeless as to cure. The author makes a strong plea for an organized campaign against cancer, similar to that being carried on against tuberculosis. He suggests that the profession must be convinced that cancer is a local disease, capable of cure if taken in time and radically removed. Early diagnosis and radical removal offer the solution of the problem. In Germany, where education in regard to cancer has been carried on, one out of every four women with cancer of the cervix, seeking relief, can be subjected to the radical abdominal operation, and are free from the disease at the expiration of five years.

Theilhaber: Non-Surgical Treatment of Carcinoma (Zur Frage von der Operationslosen Behandlung des Carcinoms). *Berl. klin. Wchnschr.*, 1913, I, 348.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author believes that the non-surgical treatment of carcinoma is not benefited by any efforts which tend to destroy all carcinomatous cells, but by the imitation of the curative efforts of nature. Nature endeavors to take corrective measures against all diseases. Spontaneous healing of carcinoma occurs much more frequently than is generally accepted. This is not obtained by cell atrophy or cell death, as in myomata, but the epithelium not infrequently transgresses beyond its limits into the connective tissue, especially if its power to proliferate beneath the epithelial layers is weakened. Ordinarily this invasion of epithelium affects the connective tissue like the irritation of a foreign body and in defense there occurs a reaction to the localized hyperæmia expressed by hyperleucocytosis and an increase in the proliferating power of the connective tissue cells. If this proliferating power is extensively diminished and if the vessels are contracted and not capable of dilatation, then these defensive measures remain absent, the epithelium penetrates without limit and a carcinoma forms. On careful examination small nests of carcinomatous cells are found in the enlarged regional lymph nodes in the neighborhood of the tumor, which are evidently not in a state of proliferation (slumbering carcinoma cells). The author refers to the fact that the lymph nodes frequently heal spontaneously, especially after extirpation of the primary

tumor. This, in all probability, indicates a process of retro-metamorphosis, a curative process for the metastatic invasion. In advanced cases the tendency to spontaneous healing by the primary tumor is slight, because it only originated in places where the above described condition of lowered resistance exists in the connective tissue. In contra-distinction to this, the metastases usually grow in tissue with normal blood supply, this tissue showing an increased tendency to spontaneous cure.

Nature's efforts to cure a carcinoma consist in hyperæmia, hyperleucocytosis, and an increase in the proliferative power of connective tissue. The opposite conditions exist in myomata which grow as long as the uterus is rich in blood, i.e., between menarche and menopause, and a spontaneous cure by an atrophy of the muscle fibers occurs after the menopause, when the uterus becomes increasingly anæmic. The author proposes to imitate nature's efforts in the treatment of cancer carcinoma. Hegar proposed castration in myomata. In malignant tumors such attempts have also been made, though unknowingly, by the injection of Emmerich's erysipelas serum or by bacterial toxins, etc. The action of these measures as well as the resulting cure of carcinoma after passing through erysipelas, smallpox, and other febrile diseases depend on the production of a local hyperæmia and a local and general hyperleucocytosis. The action of other bloodless methods of treatment can be similarly explained; as, for instance, antimeristem of Schmidt, cholin of Werner, the action of X-rays, of thermopenetration and combination of high frequency currents, diathermy and X-rays according to Müller.

HAUSER.

Meidner: Marked Influence of Mesothorium on a Cervical Cancer (Weitgehende Beeinflussung eines Portiocarcinoms durch Mesothorbestrahlung). *Therap. d. Gegenw.*, 1913, liv, 149.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author refers to a former paper (in the 36th year of the *Charité-Annalen*) in which he reports concerning a sound containing mesothorium adapted for use in inoperable uterine carcinomata. At one end of the hard rubber sound is a capsule which contains the radio-active substance. The capsule is covered with rubber tissue and three thicknesses of gauze and is carried through the vagina to the carcinomatous focus, where it is left for one or two hours. This procedure is repeated on ten to fourteen successive days. This equals one raying series. After an intermission of one to two weeks the second series is begun. Meidner reports a case which had been treated in this manner.

The patient, 74 years old, for a long time had severe genital hæmorrhages. An examination was made November 2, 1912, which revealed an inoperable carcinoma; the cervix presented a large ulcerated crater, and a tumor the size of a man's fist was found in the left parametrium. The diagnosis of cancer was made clinically but not histologically.

Mesothorium treatment was applied for 21 days during November and for 7 days in December. An examination made in the latter part of December did not reveal any improvement worth mentioning. However, the patient improved from day to day so that she felt perfectly well toward the end of January, 1913. The examination made at this time showed an apparent improvement. The tumor in the left parametrium was only the size of a hen's egg and smooth scars with raised borders were felt in place of the former ulcerations of the cervix.

Franze declared the former inoperable cancer to be an operable one. Diagnostic excisions from the cervix showed a scar tissue rich in cells and blood vessels which in a few places resembled nests of dead cancer cells. The patient has since remained perfectly free from any disturbance. HIRSCH.

Werder: The Cautery in the Radical Treatment of Cancer of the Cervix. *Surg., Gynec. & Obst.*, 1913, xvi, 579. By Surg., Gynec. & Obst.

The galvano-cautery is preferred to the Paquelin cautery because the former has been more effective in producing a thoroughly charred black surface. A properly constructed dome-shaped galvano-cautery is most effective. In the palliative operation repeated applications should be made until the surface is thoroughly charred. In the radical operation the various steps are described. Briefly they are; (1) Thorough curettement of the diseased parts and cauterization until all oozing is controlled. (2) Incision entirely around the cervix as far as possible from the affected area by means of the cautery knife at dull heat. (3) Dissection carried up between bladder and uterus to peritoneum. Bladder protected from heated knife by retractor. (4) High amputation of the cervix performed with cautery knife and surface thoroughly charred by means of dome-shaped galvano-cautery opening into Douglas' pouch. (5) Patient then prepared for laparotomy and free incision made between umbilicus and pubes. Abdominal part of operation same as in ordinary panhysterectomy except that after ligation of the infundibulo-pelvic and round ligaments with catgut, the parametria are burned through by means of Downes' electro-thermic clamps, after protecting the surrounding parts with moist gauze, and metal shields for clamps.

The operation is a bloodless one if the technique is perfect. Should there be slight bleeding, the burning may be repeated or a catgut ligature applied. Preliminary dissection of the ureters is a distinct advantage if the patient is in good condition, though it is not necessary as the ureters and bladder may be protected by putting the parametria on the stretch and pushing the bladder out of the way before applying the electro-thermic clamps. Removal of the regional lymphatics is not considered necessary or advisable on account of a possible protective function they may have and the danger of implanting the cancer cells upon the surrounding healthy tissues.

RESULTS

Total number of cases operated by radical method . .	78
Operability	38%
Primary mortality — 4 cases	5.1%
Cases operated upon over five years ago	39
By vaginal method	21
By combined vaginal and abdominal method	18
Surviving five year limit — 18 cases	46%
Deaths after five years from recurrence — 4 cases	22%
1 after 6½ years from carcinoma of liver.	
1 after 6 years, recurrence in retroperitoneal glands and spinal cord.	
1 after 5 years, recurrence in lumbar glands.	
1 after 5 years, site of recurrence not known.	
Death from intercurrent disease after 6 years	1
Living and well at present time — 13 cases	33⅓%

Hirsch: The Etiology and Treatment of Uterine Hæmorrhages (Zur Lehre von der Ätiologie und Therapie der Uterusblutungen). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 420.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Hirsch first discusses the different attempts to explain essential uterine hæmorrhages. He denies the etiological influence of sclerotic thickenings of the uterine blood vessels, endometritis, localized hæmophilia, or an abnormal state of the glands of internal secretion. He also disputes the ovarian origin based on an examination of his cases of ovarian tumors and also excludes functional disturbances of ovarian activity. He is of the same opinion as Theilhaber, that a uterine insufficiency exists; i. e., an abnormal relation between the hyperæmia, the cause of the hæmorrhage, and the contractibility of the uterus which stops the bleeding. On this account typical anatomical changes within the uterus such as connective tissue hyperplasia are not always necessary or demonstrable. This theory explains the hæmorrhages occurring in different uterine diseases, as metritis, atony or subinvolution. Excepting all the remedial measures correcting ovarian conditions, all therapeutic agents used so far attempt to arrest hæmorrhage by exciting or increasing uterine contractions. Hirsch used injections of ergotin into the uterine muscles through the cervical walls in 200 cases. The technique is similar to the one used for local anæsthesia of the uterus: ¼, ½ or 1 gm. doses are injected daily for 3 to 4 days. The indications and contra-indications are given. The results are excellent, especially in preclimacteric hæmorrhages.

BAUER.

Fries: Treatment of Amenorrhœa (Behandlung der Amenorrhœe). *Deutsche med. Wchnschr.*, 1913, xxxix, 675.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh.-s. d. Grenzgeb.

Fries reports two cases of amenorrhœa in which intracervical injections of pituglandol had promoted a menstrual bleeding after the usual methods of treatment had been tried without any result. Five injections of 1 cm. of pituglandol were used in two cases. Whether the success is lasting only further observations will show.

RUHEMANN.

Foges: X-Ray Therapy in Uterine Hæmorrhages (Über Röntgentherapie bei Uterusblutungen). *Wien. med. Wchnschr.*, 1913, lxxiii, 995.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Foges points to the superiority of X-ray treatment over operative treatment of uterine myomata, in so far as mortality and post-operative complications are concerned. The principal objection to conservative treatment is the possibility of overlooking a sarcomatous degeneration of myomata. In practice, however, this objection is negligible. Severe injuries of skin and peritoneum are avoidable with an exact technique. The most important indication for X-ray treatment in gynecology is the ability to produce a decrease or complete cessation of hæmorrhages.

Three cases are reported. In the first case diabetes, in the second valvular heart disease, and in the third refusal of the patient to submit to operation were the indications for the X-ray treatment. The author treated altogether twelve cases of myomata and four metropathies. Amenorrhœa was produced eleven times, oligomenorrhœa three times. As atrophy of the ovaries under X-ray treatment occurs much more quickly in older patients, those approaching the menopause are especially adapted to the treatment. Decrease in the size of tumors was observed only three times. The technique employed was that of Albers-Schönberg.

Softened and submucous tumors, also those that are growing rapidly or, on account of their size and location, create functional disturbances in other organs, are not adapted to the treatment. Each case, however, must be followed closely, and, should suspicion of sarcomatous degeneration arise, be immediately operated. The gynecologist and not the radiologist should set the indications. RUNGE.

Pfahler: The Treatment of Uterine Hæmorrhage by Means of the Röntgen Rays. *Am. J. Obst.*, N. Y., 1913, lxxvii, 860. By Surg., Gynec. & Obst.

This article is based upon a review of the literature and a report of twenty-three cases treated by the author during a period of ten years. The first effect noticed in the treatment of a fibroid is the decrease or cessation of bleeding. The closer to the menopause, the more rapid is this effect. Generally there is a decrease or cessation of the flow within a month or two after the first two series of the rays, or after one or two full doses (10 to 20x) have been given. For the production of complete and permanent amenorrhœa, from one to six applications (10 times to 60 times) are needed, requiring from three to six months usually. Occasionally after the first treatment the next period is more profuse than normal, in view of which very anæmic patients should be put to bed. The reduction of the tumor is slow and secondary to the effect on the bleeding. He states that of sixteen patients who ceased treatment it is impossible to find the tumor in twelve.

The same nervous phenomena after the induced

menopause may be expected as after the natural one. In cases of metropathic hæmorrhage the results are generally more prompt and striking. In older individuals it is advisable to continue the treatment after amenorrhœa has occurred in order to make the effect permanent. In young individuals it may be sufficient to produce a temporary oligomenorrhœa, expecting that later normal menstruation may be re-established.

Pfahler emphasizes the following points in the technique: It is necessary that the operator be an experienced röntgenologist; the exciting instrument give a uniform current of high voltage; and the tube be one that will keep a constant high vacuum of 7 to 8 Benoist; the distance from the target of the tube to the skin of the patient is 12 inches. The rays are to be applied over the ovaries and tumor, if one be present. They should be confined to the area treated as much as possible and much care exercised that no burn is produced. The frequency of application will depend upon the patient and skill of the operator. The most favorable time for treatment is just after a period or at a time corresponding to it. A little less than a full dose (9 times) should be given and repeated at a corresponding time the succeeding month. From one to six such series is usually necessary. By the use of filters and a radiometer, burns of the skin are more successfully avoided. In concluding he says that it is the method of choice in the control of hæmorrhage in those at or near the menopause when cancer can be eliminated as a possibility, but is not the method of choice in young people unless there be contra-indications to operation. N. SPROAT HEANEY.

Fuchs: X-ray Therapy or Vaporization in the Treatment of Hæmorrhagic Metropathys (Röntgentherapie oder Vaporisation bei Hämorrhagischen Metropathien). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 496.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports his experiences with the vaporization method obtained in 71 cases of hæmorrhagic metropathies during the last nine years. He employs exclusively the vaporization of the fundus cavity, the principal source of the bleeding, after thorough curettment of the mucosa and cessation of all bleeding. After the introduction of an insulator tube for the special protection of the isthmus, steam is introduced at a temperature of 115° to 120° for from 30 to, at most, 60 seconds. The method is especially adapted to preclimacteric bleeding, excepting severe cases of adenomyo-metritis, to all hypoplastic and senile uteri; to all myomata. It is directly contra-indicated in all catarrhal inflammations of the endometrium, as well as in all inflammatory conditions in the neighborhood of the uterus. In 92 per cent permanent cures were obtained, in 47.6 per cent a permanent amenorrhœa resulted; in 44.4 per cent an oligomenorrhœa approaching the normal menstruation; in 8 per cent of cases was there complete failure. Analogous

to the clinical results were the anatomical findings obtained at a later exploration of the uterine cavity with sounds. On the strength of his good results the author is unwilling to decide in favor of X-ray treatment, as the latter is much more time-consuming and usually results in an injury to the function of the ovary. He highly advocates his more conservative method as the method of choice in all hæmorrhagic metropathies in older, as well as younger, women. SÜSSENGUTH.

Küstner: A Perforation of the Fundus Uteri (Ein am Fundus perforierter Uterus mit Adnexen). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient was brought into the clinic with a marked uterine hæmorrhage, following an attempt at abortion. Residual portions of placenta were manually removed, followed by an alcohol douche, and when the curette was being introduced it slipped in a great distance without meeting with resistance. Owing to the serious condition of the patient an immediate laparotomy was performed, revealing a widespread peritonitis, several cupfuls of a cloudy, brown exudate escaping. The uterus was the size of a goose-egg and showed a perforation at the fundus. The edges of the perforation had an old appearance, and it was certain that this had been done before the patient entered the clinic. In spite of complete hysterectomy and drainage the patient died within twelve hours.

Sigwart: Removal of Danger of Peritonitis by the Operative Treatment of Ruptured Uterus (Die Ausschaltung der Peritonitisgefahr bei der operativen Therapie der Uterusruptur). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

In incomplete ruptures with little damage to the parametrium, the total extirpation per vagina is indicated. Where extensive injury or hæmatocele is found, laparotomy is indicated. Exact double suture of peritoneal defects is recommended with no drainage. Sigwart reports twelve cases, six complete, six incomplete ruptures. Three vaginal, eight abdominal total extirpations and one simple closure of the defect were performed. Three moribund cases died at operation, and the other nine cases recovered without signs of peritonitis.

J. R. MILLER.

ADNEXAL AND PERIUTERINE CONDITIONS

Frankl: Ovarian Functions in Basedow's Disease (Über die Ovarialfunktion bei Morbus Basedowii.) *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Surg., Gynec. & Obst.

Disturbances of ovarian function predispose to Basedow's especially diminished ovarian function as in puberty, pregnancy, and lactation. The menopause must also be included. Of forty cases, eight began after 40 years, six between 50 and

52 years, and five in the menopause. In the severe cases amenorrhoea was the rule, though the type of menses gave no sure prognosis. Basedow's disease is not caused by damage to the ovaries. On the theory that ovary and thyroid work oppositely on the sympathetic, Frankl gave ovarian tablets in three cases with improvement of tachycardia and sweating.

J. R. MILLER.

Whitehouse: The Autoplastic Ovarian Graft and Its Clinical Value. *Clin. J.*, 1913, xliii, 107.
By Surg., Gynec. & Obst.

In this short discussion of ovarian transplantation, Whitehouse reports one case in which the patient was menstruating regularly one year after operation. He believes that much greater success will attend the use of small portions of tissue, as is done in the case of the thyroid and other glandular structures. The vitality of the tissue is much more likely to be maintained if "seedling" grafts are made. As regards the site of implantation, he prefers the rectus muscle and subperitoneal tissue. In conclusion he regards these points as essential to the success of the operation:

1. Absolute asepticity and the avoidance of strong antiseptics which would destroy the vitality of the tissues. Pus in cases of chronic pyosalpinx and salpingo-oöphoritis is usually sterile.

2. The employment of minute or "seedling grafts."

3. The presence of a good vascular supply in the tissue used as the bed for the graft. Muscle is entirely satisfactory for the purpose.

4. The ovarian tissue should be left in contact with the body fluids within the peritoneal cavity until it is required for the purposes of the grafts. In the case here recorded the ovary was placed in Douglas's pouch until the time arrived for closure of the abdominal wound.

CAREY CULBERTSON.

Regaud and Lacassagne: The Conditions of Sterilization of the Ovary by X-Ray (Sur les conditions de la stérilisation des ovaires par les rayons X). *Compt. rend. hebdom. Soc. de Biologie*, 1913, lxxiv, 783.
By Journal de Chirurgie.

Absolute sterilization of the ovary may, it seems, be obtained by direct irradiation. It is only necessary that a sufficiently strong dosage be used. But there has been some discussion as to whether the same results could be accomplished by irradiation through the thickness of the abdominal wall. Several early experimenters have claimed that this was the case, but the authors doubt this because of the results of their experiments with rabbits and dogs.

In the rabbit the ovaries occupy a fixed and superficial position. If one uses very hard rays and a dose of 22 units H. absolute sterilization is possible. (An aluminum plate of 4 millimeters thickness must be used as a filter to avoid radio-dermatitis.) Of seven rabbits thus treated by the authors, four remained sterile after fecundation although there was a late re-appearance of the symptoms of rut. The

ovaries of these rabbits contained only a few remaining normal folliculi.

In the bitch, the ovaries are more mobile and deeply situated. Here sterilization seems to be impossible since it is necessary to irradiate too large a surface and to use a dosage which is so strong as to cause the death of the animal by lesions of the intestines.

For the same reason sterilization in women is impossible by irradiation through the abdominal wall. The authors consider that the few cases which have been published are not interpreted correctly.

PIERRE CRUET.

Bland-Sutton: A Note on Typhoid Infection of Ovarian Cysts. *Universal M. Rec.*, 1913, iii, 385.

By Surg., Gynec. & Obst.

The importance of differentiating the B. typhosis from the B. coli and the B. paratyphosus is emphasized by the author as well as the necessity of culturing on special media and of employing the agglutination test. All of these methods were taken advantage of in determining the nature of the infection in two cases here reported.

In the first case the patient had been treated one year previously for typhoid fever. The cyst was congested, plum-colored and veiled in a sheet of thin adherent omentum, but showed no axial rotation on its pedicle. It contained fifty ounces of yellow purulent fluid free from odor. A pure culture of the B. typhosus was definitely proven.

In the second case the patient had had typhoid fever sixteen years previously and an ovarian cyst was opened and drained soon after, a sinus persisting for nine months. The author's operation revealed an infected ovarian dermoid, the pus containing both B. typhosus and streptococci. The patient's blood gave a strong agglutination reaction, though both urine and feces were negative.

In conclusion Bland-Sutton shows that the majority of reported cysts infected by the B. typhosus have been of the dermoid type. The long duration of the infection as demonstrated by his second case is in all respects comparable to similar well-recognized infections of the gall-bladder.

CAREY CULBERTSON.

Wight: Ovarian Cyst with Twisted Pedicle. *Northwest Med.*, 1913, v, 140.

By Surg., Gynec. & Obst.

Wight's case had never been pregnant, and her present trouble began one and one half years ago with pain in the right iliac region, slight nausea, but no vomiting nor temperature. Her second attack occurred several months ago, lasting five weeks. Appendicitis was the diagnosis in both attacks. The third attack was similar in all respects, except that it was accompanied by a temperature of 100.4° and a pulse of 120. Operation for chronic appendicitis was advised. Laparotomy revealed a dermoid cyst and unilocular cyst of the right ovary with a twisted pedicle. The dermoid was the size of an

orange, and along with it was a unilocular cyst twice its size, though no diagnosis of tumor had been made before the operation.

C. D. HOLMES.

Cowie: A Case of Malignant Multilocular Cyst of the Ovary in a Young Girl. *Physician & Surg.*, 1913, xxxv, 200.
By Surg., Gynec. & Obst.

The author gives a detailed history of a seven year old girl who entered the hospital for a painless enlargement of the abdomen. The patient menstruated a month before entering and again just before leaving the hospital. Cumming operated upon her and removed a right ovarian cyst which weighed about three pounds. This proved to be a multilocular cyst of the ovary undergoing carcinomatous changes, or a malignant teratoma.

C. H. DAVIS.

Gurd: Primary Malignant Neoplasm of the Fallopian Tube. *Canad. M. Ass. J.*, 1913, iii, 389.
By Surg., Gynec. & Obst.

True primary neoplastic tumor formation in the Fallopian tubes is a comparative rarity. Cancers constitute the most malignant blastomata of this organ. The author reports minutely a case of primary papilliform, medullary cancer of the tube, describing the symptoms, technique of operation and the microscopic examination of portions of the removed organs.

HENRY SCHMITZ.

EXTERNAL GENITALIA

Cauwenberghe: Thrombus and Vulvo-Vaginal Hæmatoma (Thrombus et hématomes vulvo-vaginaux). *Bull. Soc. belge de gynec. et d'obst.*, 1913, xxiii, 167.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient was 32 years old and in her fourth pregnancy when she entered the clinic. At the onset of labor the child lay in the left occipito-anterior position. Dilatation was slow and difficult. The second stage lasted one and one half hours with powerful pains, the child being normal. The after-birth and membranes showed no abnormality. On the day after delivery a hæmatoma was noticed on the inner side of the right labium major. This was treated with cold applications, all pressure being avoided for fear of gangrene. The following day the swelling was larger, but for fear of infection it was decided to wait. Finally, after two days, with thorough disinfection, a large incision over the deepest part permitted the removal of a large quantity of clotted blood. The cavity was not explored, to avoid a possible recurrence, but was irrigated and packed with iodoform gauze. The hæmorrhage did not recur, and no infection set in. The large cavity filled up with granulations within three weeks, and mother and child were discharged in good condition. The author believes that in the absence of other organic causes the hæmatoma was due to the powerful efforts of the patient to deliver herself rather than submit to a forceps delivery.

POLLAK.

Brouha: Creation of a New Vagina, with Report of a Case of Transplantation of the Small Intestine into the Vagina (La création d'un vagin artificiel avec relation d'un cas de transplantation vaginale del'intestine grêle). *Bull. Acad. r. de Med. de Belgique*, 1913, xxvii, 29 and 152.

By Journal de Chirurgie.

After summarizing the various old (generally imperfect) processes devised by surgeons to give a vagina to women denied one by Nature, the writer dwells at full length upon the two methods which now vie with each other for the favor of the surgical world, viz.: Schubert's, which takes the terminal portion of the rectum to make the new vagina, and Baldwin's, which for the same purpose uses a loop of small intestine.

Baldwin's operation, as modified by Stoeckel, was Brouha's choice to relieve the moral distress of a girl, 26 years old, who absolutely insisted upon operation. The first step was to burrow a canal in the recto-vaginal septum up to Douglas' pouch. Next the abdomen was opened through a Pfannenstiel incision. There was no trace whatever of an uterus; there were two ovaries flattened on the lateral pelvic wall and each accompanied by a small parovarian cyst, which was removed. Then a loop of small intestine, 10 inches long, was freed, due care being taken to spare the mesenteric attachment, and, by means of a thread, said loop folded in its middle, V-fashion, was dragged through the incision in the peritoneum of Douglas' pouch down to the vaginal tunnel. Continuity of the gut was re-established and the abdomen was closed.

The third and last step consisted in bringing down to a level with the hymen the tip of the folded intestinal loop which filled the vaginal infundibulum. This was easily done; the loop was opened, and its edges sutured to the edges of the cutaneous wound.

Three months after the operation there was between the urinary meatus and the anus a round opening admitting the finger and leading into a canal $1\frac{3}{4}$ inches long which terminated at the spur formed by the angle of the kink of the transplanted loop. It will be easy to ascertain the functional result, as the patient will be married in a few months. The paper is illustrated with several diagrammatic figures which enable the reader readily to understand at a glance the described procedure.

J. DUMONT.

Schmid: Vesico-Vaginal Fistula Cured by Transplantation of the Fascia Lata (Blasenscheidenfistel, geheilt durch freie Fascientransplantation). *Ztschr. f. gynäk. Urol.*, Leipzig., 1913, iv, 33.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The transplantation of the fascia lata as proposed by Kirschner has found extended use in surgery, but a few reports only are found in gynecological literature. The use of fascial transplantation in operations for vesico-vaginal fistula is of recent date. In the patient referred to three negative attempts were made to close the fistula. The fascial transplanta-

tion in the fourth operation brought about a favorable result.

After separation of vesical and vaginal mucous membranes, the edges of the vesical fistula were freshened and the fistula closed in a transverse direction by four catgut sutures. After careful hæmastasis a portion of the fascia lata of the right thigh was so sutured between vesical and vaginal mucosæ that it covered the entire vesical suture. To obtain as much tension as possible, the fascia was sutured taut by catgut sutures at its four corners. Finally the vaginal mucosa was sutured in a longitudinal direction by the assistance of a relaxation incision. After operation a retention catheter was used for 11 days. The patient completely recovered.

It is of the utmost importance that the fascial flaps be tightly stretched as they fold up, thus interfering with the blood supply. The formation of a dead space or hæmatoma also interferes with healing. Small fascial flaps are better, as they are less exposed to the danger of necrosis. The use of fascial transplantation is recommended for all cases of vesico-vaginal fistula which are not cured by a primary fistula operation, further for all primary operations of larger fistulæ if one does not succeed in uniting the vesical and vaginal mucous membrane. References are given. BORELL.

Savarè: Contribution to the Study of Primary Carcinoma of the Vulva (Contributo allo studio del carcinoma primitivo della vulva). *Ann. di ostet. e Ginec.*, 1913, xxxv, 238.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports twelve cases of primary vulvar carcinoma occurring among the three hundred cases of carcinoma of the female genitals during six years in the hospital at Siena. He mentions the age, etiological factor, and seat of the neoplasm (two cases developing during pregnancy). Only one case was not of the squamous-celled type. Savarè lays stress on the pruritus as an initial symptom. The internal and external glands become involved quite early, and this explains the frequent recurrence after operation. Four of the author's cases were inoperable. In operable cases, the author removes both internal and external glands as far as possible. Three of the cases showed post-operative recurrence, one developing from the remaining glands, the other two beginning in the scar. BERBERICH.

Graff and Novak: Basedow's Disease and the Genital Glands (Basedow und Genitale). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

The examinations of 36 cases of Basedow's disease showed a diminished genital function in eighteen, an increase in one, and no change in twelve. In ten cases the indications of a primary ovarian deficiency were present. Dysmenorrhea was present in six cases; seven cases, which under the circumstances might have become pregnant remained sterile.

One patient who became pregnant, grew worse and improved under antithyroidin; two got well spontaneously in the second half of pregnancy. One case with compression of the trachea and status lymphaticus died under anæsthesia. One child was normal, one premature and one under-developed. In twenty-six cases, where the genital examinations were of value, sixteen cases were normal, one each had parametritis and parametritis atrophicans of Freund, and three were atrophic, probably senile. One 27 year old patient had a very small uterus; four had outspoken infantile genitalia and ten had other stigmata of hypoplasia. Basedow's disease often starts in puberty, pregnancy or the climacterium. One started after a hysteromyomectomy, and another after X-ray castration for myoma.

Graff concludes that the genital system can be greatly influenced by the thyroid, and that the thyroid reacts sensitively to genital changes, partly perhaps through sympathetic changes. Individual cases must be examined carefully to determine the primary factor. J. R. MILLER.

Gräfenberg: A Contribution to the Chemistry of Vaginal Secretions (Ein Beitrag zur Chemie des Scheidensekretes). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The acidity of the vaginal secretions of any woman has a wide range of variation. By making a serial examination of the secretions of the same women it becomes evident that the acidity is dependent on the menstruation for the percentage of lactic acid; it seems higher before, during, and after the menstrual period. The fluctuations in the acidity are independent of the amount of menstrual flow, for they occur also during pregnancy and after uterine operations. There are no quantitative fluctuations in the amount of acid during the menopause.

Pollard: The Treatment of Gonorrheal Infections with Tanargentan Suppositories (Die Behandlung gonorrhöischer Prozesse mit Tanargentan-Stäbchen). *Deutsche med. Wchnschr.*, 1913, xxxix, 656.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Tanargentan is a silver albuminate combined with an astringent. In the preparation of the ordinary bougies an easily soluble fatty base is used which covers the mucosa with fat so that the bactericide can not act and stronger compounds cause irritation. These suppositories, poor in fat, can easily be introduced into the female urethra; in this way it may be used by public women, who are rarely entirely free of gonococci, as a prophylactic and thus protect the male. The ordinary suppositories are with difficulty introduced into the cervical canal, but the elastic tanargentan bougies can be easily introduced and a spreading of the gonorrheal process to the uterus and adnexa is not to be feared. The results of the treatment were good, irritating actions did

not appear, the secretion and gonococci decreased. The use of these bougies in vaginal gonorrhea of girls is very successful, its action is lasting while solutions always are discharged. After tanargentan has displayed its antiseptic action it continues to act against the inflammation and inhibits the secretion by its astringent substance in the form of tannin. Thus it removes the often long continued mucous discharges. It is also to be recommended for the chronic forms of gonorrhea. VON MILTNER.

Vogt: Contribution to Melano-Sarcomata of the Clitoris (Beitrag zu den Melanosarkomen der Clitoris). *Arch. f. Gynäk.*, 1913, xcix, 364.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Vogt offers a collective report of 8 primary melano-sarcomata of the clitoris, which have been published to date, with the addition of a personally observed case.

His patient was a woman, 70 years old, who arrived at the menopause at 52. Nine months prior to the operation the patient noticed a bluish discoloration on the left labium, with the formation of a growth. The urethral os was covered by the tumor but was not itself involved. Extirpation of the tumor with the lymph glands and the surrounding parts of skin was undertaken with an uneventful recovery. Death ensued 3 months later from senility. Microscopical examination showed that the epidermis and corium were intact, the tumor being situated in the subcutaneous adipose tissue. The pigment content of the cells was pronounced and pigment in the shape of amorphous masses was found in the lymph spaces and blood vessels. The superficial and deep lymph nodes have undergone a malignant degeneration.

Melano-sarcoma of clitoris, in contradistinction to vulvar sarcoma, is found mostly in elderly women. The inguinal glands are always involved. Prolonged intervals before recurrence after radical operations have almost never been observed. The superficial and deep inguinal lymph nodes must always be removed even if they appear healthy, on account of the great malignancy. Should they be involved then the iliac and hypogastric lymph glands also must be removed. GRÜNBAUM.

MISCELLANEOUS

Spillmann, Thiry and Benech: Spontaneous Gangrene of the Genital Organs in Man and in Woman (La gangrène spontanée des organes génitaux chez l'homme et chez la femme). *Paris méd.*, 1913, ii, 319. By Journal de Chirurgie.

Among the reported cases of gangrene of the genital organs there are a large number in which the pathogeny is but little understood, namely, those cases occurring in young individuals without organic deficiencies and whose hygiene is good. Fournier has given a remarkable clinical description of those rapidly progressing cases, to which he applied the name of spontaneous fulminating gangrene.

This type, heretofore, has been met with only in males. The authors, however, have gathered three cases in women, one of these being original and unpublished. The condition seems much more dangerous in women, very likely owing to the anatomical disposition of the female genital organs. In the female the mucous surfaces are very extensive and offer a particularly favorable ground for bacterial growth; fascial septa are less developed, and, therefore, do not constitute as powerful a barrier against the spread of infection; furthermore, treatment is much less efficient, because it is very difficult to keep the gangrenous parts separated from the healthy skin or other gangrenous parts; and, finally, because the method of treatment so easy to apply in the male, free irrigation, or even continuous bathing, is not satisfactorily applicable here.

The three reported cases died. Their unpublished case is summarized as follows: a young girl, 18 years old, without any previous morbid history, was admitted to the hospital for a gangrenous sore involving the labia majora, the groins and anus and ascending to the sacrum. She states that after a profuse diarrhoea, abrasions developed around the anal margin and became the starting point of the actually existing lesions. The perineal muscles are exposed as if dissected in an anatomical specimen; gangrenous patches are seen on the fasciæ; and the wound emits an offensive stench. The general condition is poor; temperature 102°, pulse 120. The necrotic process progressed, the dead tissues fell off, and soon a cloaca took the place of the rectum and vagina; the rectal ampulla was bared in the middle of the gangrenous focus. Injections of camphorated oil and electrargol were given without any appreciable benefit.

As cultures show the presence of Vincent's bacilli and spirilla, two intravenous infusions of 0.45 gm. neosalvarsan were given at four days' interval. This brought about a fall in the temperature and an improvement in the general condition. In the third week, a two months foetus with its placenta was expelled, the ovum being intact. Thereafter the general condition steadily grew worse, decubital ulcers developed and the patient died.

The autopsy did not disclose any important facts. The lungs exhibited active tuberculous lesions. The uterine cervix was completely necrotic; the sacrum and coccyx intact, but all the soft parts of the region were involved and almost in a state of deliquescence. Bacteriological examination showed numerous Vincent bacilli and spirilla in the necrotic foci associated with many gangrene-producing micro-organisms (Loeffler bacillus, micrococci in chains or clumps, colon bacillus, etc.).

J. DUMONT.

Chisholm: Menstrual Molimina. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 288. By Surg., Gynec. & Obst.

Chisholm has made a careful inquiry into the frequency of disturbances of menstruation in otherwise healthy young girls and from an analysis of the

menstrual histories of 500 school girls of English middle-class concludes:

1. The majority of girls commence menstruation painlessly, 58 per cent of the series had no pain.

2. That a number have discomfort, some occasionally, some regularly, for a time varying from one hour to two days just before and with the commencement of the menstrual period. This discomfort is often slight in character.

3. That a few have more severe pain, either regularly or occasionally. A very small number, i. e. 1.8 per cent, are incapacitated.

4. That a small number, i. e., 1.2 per cent have discomfort or pain for a longer period than one or two days during the whole time of menstruation.

5. That the discomfort in girls is most frequently local in character, and when there is serious general disturbance it is accompanied by severe local pain, and probably proceeds from some local abnormality, congenital or acquired.

6. That the best developed girls seem less likely to have menstrual disturbances.

7. That this freedom from discomfort is not affected by hard mental work carried on under healthy conditions.

N. SPROAT HEANEY.

Henry: Clinical Manifestations of Genital Tuberculosis in Women. *Med. Herald*, 1913, xxxii, 175.
By Surg., Gynec. & Obst.

The author gives a very interesting review of this subject. His statistics are of particular interest. After a large number of autopsies on women dying from tuberculosis, by many observers, it has been found that the genital organs are affected in from 3 to 12 per cent, while men dying from general tuberculosis have the genitals affected only about $\frac{1}{4}$ to $\frac{1}{6}$ as often. In 223 cases of genital tuberculosis reported by various observers, 81 involved the uterus. In 4,470 collected autopsies on women, some 53 had tuberculosis of the tubes, while in autopsies on 116 tubercular women, 14 tubal cases were found. In 814 collected cases of salpingitis 29 were tuberculous. Of 394 cases of tuberculous lesions in the genitals 77 showed involvement of the ovary.

The author reports four cases of his own. He calls attention to the fact that abortions, gonorrhoea, and other inflammations, as well as all injuries or contusions and general run-down or anæmic conditions may be predisposing factors in the origin and development of genital and peritoneal tuberculosis.

C. H. DAVIS.

Findlay: Management of Genital Tuberculosis in Women. *Med. Herald*, 1913, xxxii, 181.
By Surg., Gynec. & Obst.

The author reviews the subject and draws the following conclusions:

1. Genital tuberculosis, in women, is rarely a direct cause of death. The fatal issue is usually determined by the primary focus in the lung or bowel.

2. In fully half the cases there is no urgent indication for operative interference.

3. As genital tuberculosis is rarely primary, the symptoms due to the primary lesion must be discriminated from those due to the lesion in the genital organs.

4. The symptoms referred to the genital organs will usually yield to palliative measures.

5. A radical operation is rarely justified for relief from symptoms caused by genital tuberculosis.

6. There is danger in operative interference from the awakening of a latent primary focus, from the high primary mortality in these cases, and from the unnecessary sacrifice of organs, inasmuch as spontaneous healing is a possibility, as in tuberculosis elsewhere in the body.

7. In tuberculous peritonitis, the cause of death, in 90 per cent of cases, is chargeable to the primary focus.

8. In operating tuberculous peritonitis it is well to remove the tubes when infected in order to cut off the source of supply to the peritoneum.

9. The utmost conservatism should be exercised in dealing with the ovaries and uterus in young women.

10. The exudative type of tuberculous peritonitis is alone favorable to operation. Do not operate in the presence of a fever or an active primary focus in the body.

11. In the absence of severe symptoms directly referred to the lesion in the genitalia or peritoneum, operative measures should give way to the usual hygienic measures, at least for an extended trial.

C. H. DAVIS.

Theilhaber: The Influence of the Climacteric on Cancer (Der Einfluss des Klimakteriums auf die Carcinome). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The connective tissue of the foetus contains a large number of cells, and as the individual grows older they become fewer in number. An exception occurs during pregnancy when the number of cells in the connective tissue of the genital organs rapidly increases. A very rapid decrease in the number of connective tissue cells occurs during the climacteric. The quantity of blood present in the genitalia shows a similar behavior, and it steadily decreases, at least after the 20th year. An exception also exists during pregnancy and labor when the amount of blood increases markedly, while it decreases rapidly during the climacteric.

The disposition to cancer is in inverse ratio to the richness of the connective tissue in cells and blood. Youthful age is almost immune from cancer of the genitalia; it very rarely develops during pregnancy and the puerperium, while its occurrence is exceedingly frequent during the climacteric. The explanation of this is to be sought in a disturbance of the equilibrium between the epithelial and connective tissue cells caused by the few connective tissue cells

in contact with the corresponding epithelium, for the connective tissue cell is the obstacle against the advancing epithelial cell. The latter penetrate especially easily if such processes as extensive scar formation and chronic inflammations, causing a decrease of cells and blood in the connective tissue, already exist. The beginning invasion of the epithelium into the connective tissue is frequently rendered harmless by the reactive hyperæmia and round-cell infiltration which immediately sets in. This reactive hyperæmia does not obtain its purpose if a *restitutio ad integrum* is impossible on account of the marked anæmia of the tissue with a resulting scanty round-cell infiltration (old inflammatory processes or extensive scar formations) or if causes of a general nature render the formation of round-cells difficult (extensive atheroma, atrophic degenerations in places where round cells are formed as the spleen, lymph nodes, etc.). These considerations should teach us to prevent recurrences after operations for cancer by increasing the strength of the entire body and by producing a hyperæmia of the scar by dry cupping, massage, diathermy, injections of uterine extracts, etc. In the treatment of cancer also all those methods which excite hyperæmia and round-cell infiltration, as raying by the X-rays or radium, cholin, uterine extracts, toxines, etc., are rational.

Hauser: Multiple Primary Cancers of the Female Genital Organs (Multiple primäre Carcinome des weiblichen Genitalapparates). *Arch. f. Gynäk.*, 1913, xcix, 339.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Multiple primary tumors of the genital organs occur either in the different organs of the genital system (the breast and thyroid gland also belong to this system), or only in the uterus. In the latter organ they may be separated from each other or not. If uterine and ovarian cancers occur at the same time it is often very difficult to decide whether they depend on each other or whether the ovarian tumors are not metastases of other primary growths. In adenocancers of the uterus, and squamous and cylindrical cell cancers of the corpus occurring at the same time the question arises whether two primary cancers are concerned or only one with a metaplasia of the epithelium in the other. Although squamous epithelium has been repeatedly found in the uterus the latter explanation is the more probable one. It is only in the rarest cases that we may suppose that a metaplasia preceded the formation of a cancer. Only 3 cases have been recognized as multiple primary cancers in the uterus and Hauser here desires to add a fourth one. To the 6 cases of multiple primary cancer in the different genital organs collected by Lubarsch, two probable cases can be added, and also a case of his own. The author's cases are as follows:

1. A nullipara whose menopause occurred 3 years ago suffered for the last 9 months from a bloody discharge with ascites. Bilateral ovarian tumors with peritoneal metastases and a large uterus were found

at operation. The left ovary revealed a solid medullary cancer, the right ovary a pseudomucinous cyst, while in the uterus was an adenocarcinoma, and in the right tube metastases of the ovarian cancer. There was no evidence that the ovarian tumor was metastatic, the histologic construction also being against this. 2. A multipara, 41 years old and at the end of pregnancy, had had irregular hæmorrhages for the last year. Cervical cancer was made out and Cæsarean section with radical extirpation was performed. A sloughing cancer was found in the posterior lip, the largest portion of which was squamous celled with epithelial pearls. The smaller portion of the cancer which was found in the cervical canal was an adenocarcinoma. The cells resembled medium sized cylindrical epithelium and had borders and areas which were mucicarmin positive. Both portions were intimately connected with each other without any distinct line of demarkation.

KERMAUNER.

Goldstein: A Case of Acromegaly Following Castration in an Adult Woman (Ein Fall von Akromegalie nach Kastration bei einer erwachsenen Frau). *München. med. Wchnschr.*, 1913, lx, 757.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient, 38 years old, who as a girl showed a tendency toward gigantism, was subjected to a pan-hysterectomy for a myomatous uterus. Enlargement of the hands and feet, thickening of the zygomatic region and protrusion of the eyebrows was noticed the following year; in short, an acromegaly developed, due to an increase in the hypophyseal secretion without recognizable enlargement of the gland. From the lack of the neutralizing ovarian secretion, the organism became flooded with the accumulated hypophyseal secretion. The glandular apparatus governing the growth of the osseous system was not normal in this patient as is shown by the tendency to gigantism when a girl, and the poorly balanced organism was thrown entirely out by the exclusion of part of the secreting apparatus. As the absence of the epiphyses prevented an increase in the length of the bone, a thickening resulted.

KREBS.

Franz: Methods of Physical Treatment in Gynecology (Die physikalischen Behandlungsmethoden in der Gynäkologie). *Zeitschr. f. ärztl. Fortbild.*, 1913, x, 137.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Physical treatment is advocated for sterility combined with dysmenorrhœa due to faulty development of the genitalia, and for sterility which is caused by hyperinvolution after delivery. For such cases, bimanual massage and electric current applied after Apostel's method for ten to fifteen minutes are recommended because they effect an improvement of the musculature and of the mucosa of the uterus. Leucorrhœa and chronic inflammation after puerperal infection, salpingitis, pelvic peritonitis, and adnexal tumors are considerably influenced by this

therapy; parametritis, however, is not much benefited. Periproctitic exudates with scar tissue formation are similarly benefited.

Tuberculous diseases of the adnexa are inaccessible to physical treatment, and operation is the proper procedure. Gonorrhœal inflammations are very favorably influenced by massage and heat; here one hand massages outside, while the other one rests motionless in the vagina. The various methods of massage and of heat are discussed. One hundred and ninety cases of genital diseases which Franz treated were favorably influenced by his methods, while in 15.3 per cent there was no effect. X-ray treatment is advocated for myomatous and climacteric hæmorrhages. Improvement was observed in 59 out of 111 cases of myomata, or 83 per cent. The treatment is contra-indicated in pedunculated myomata which are partly expelled from the vagina when gangrene or carcinomatous degeneration are suspected; in myomata with acute incarceration of the bladder; and in women less than 40 years old.

MÜLLER.

Walther: Synthetic Hydrastinin-Bayer, a Substitute for Fluid Extract Hydrastis Canadensis (Synthetisches Hydrastinin-Bayer, ein Ersatz für Extr. Hydrastis canadensis fluidum). *München. med. Wchnschr.*, 1913, lx, 694.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This synthetic preparation of hydrastis is made from heliotropin. The writer has used it to advantage in menorrhagia, the result of disturbed function of the ovaries and chronic diseases of the adnexa, dysmenorrhœa with menorrhagia, displacement of the uterus, secondary hæmorrhage, the result of heart disease or hepatic disturbances, and in cases of myomatosis uteri. It is an excellent preparation in the after-treatment of curettage. Dosage: 25-30 drops, two to three times daily, in cases of menorrhagia; 10-15 drops, two to three times daily, as prophylaxis, and after cessation of hæmorrhage as well as in the cases of curettage. Subcutaneous injection of 0.0175 (= 27 drops of the liquor) had the same therapeutic effect.

FREUND.

Klotz: X-Ray Treatment in Gynecology (Strahlentherapie in der Gynäkologie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author considers the fact that cancers can only be influenced by the X-rays when enormous doses are applied. The deep penetrating rays are necessary. In examining the tumors after treatment, it is seen that the tumor cells in the center of

the growth are frequently not reached by the rays. According to the experiments of Neuberg and Kaspari on animals there are certain substances which possess an affinity for heavy metals. It is also known that these substances cannot act unless they come in contact with each individual cell of the tumor, which is impossible if the substances are injected subcutaneously or into the tumor itself. Therefore they must be applied directly into the blood stream from which each cell derives its nutriment. He advises on that account the simultaneous injection of these substances with the X-ray treatment to attack the tumor from two sides. The author has lately begun this treatment at the Lubinger Gynecological Clinic, using silver substances, especially collargol intravenously, with medium sized doses of X-rays and in addition radium bromide. Experiments with other metals (selenium and copper) are in progress. No results can be published, as the time of its employment is still too short. The author, however, advises the combined treatment in all cases of inoperable carcinoma of the uterus.

Frankl: Technique of X-ray Treatment in Gynecology (Zur Technik der Röntgen-Gyniatrie). *Gynäk. Rundschau*, 1913, vii, 247.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The method of X-ray treatment employed at the Schauta clinic in Vienna follows that of the Freiburg school: multiple areas of application, cross-firing, filtration, and short focal distance. The instrumentarium made according to the author's design is as follows: For abdominal application compression of the abdominal wall with a taut-drawn towel, over this a lead-rubber binder with marks designating the naves and the midline; on this binder are outlined 24 synaces of three cm. each. The tube is applied to each field. Its lower end fits into a funnel-shaped tube protector, the size of its lower opening corresponding to the size of the field and is adjusted to a 1 or 2 cm. focal distance from the skin. An aluminum filter can be inserted into the lower end of the funnel. For vaginal application of the rays the author uses a lead-glass speculum with an aluminum ring. The aluminum ring fits firmly into a hole in an adjustable stand. The hole in the stand is surrounded by four flexible pieces of lead-rubber to act as a covering for the vulva and thighs. The focusing of the tube in front of the hose is very simple, and a filter can be placed in front of it if desired. The author sees a great advantage in rhythmic interruption. Tubes employed are the "Radicologie" and the "Zentralrohre." MONHEIM.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Peterson: A Case of Full Term Ectopic Gestation with a Dead Foetus Retained in the Abdominal Cavity for Eight Months. *Physician & Surg.*, 1913, xxxv, 198.
By Surg., Gynec. & Obst.

The author reports a case which he operated eight months after term. Most of the placenta was removed, but the patient developed peritonitis and died. The author believes that the placenta should be removed whenever possible, even if, to accomplish this, preliminary ligation of the large arteries or even compression of the aorta be necessary. When the placenta cannot be removed, the best results have followed the stitching of the sac to the abdominal wall and protecting it and the placenta from the peritoneal cavity by gauze packing. C. H. DAVIS.

Neugebauer: A Case of Pregnancy Five Years after a Piccoli Operation for Puerperal Inversion of the Uterus (Über eine Geburt 5 Jahre nach vorausgegangener Piccolioperation wegen puerperaler Uterus-inversion). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 529.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports the case of a nineteen-year-old woman suffering from an inversion of the uterus of three months' standing following spontaneous delivery. A cure was effected by means of a total posterior hysterotomy by the Piccoli method. Five years later she was spontaneously delivered of a full term child. The expressed placenta was bilobed, a condition which the author assumes to have some connection with the operation, in so far as the placenta was situated on the posterior uterine wall and the connective tissue bridge between the two parts corresponded to the uterine scar, which the villi were unable to penetrate. On the strength of this observation, the author suggests that in repeated Cæsarean sections the site of the placenta should be determined and, if over the old scar, it should be examined for the described abnormality. There are ten cases of pregnancy reported after an operative re-inversion of the uterus. The author concurs with Mansfeld in the opinion that inversion is due to atony of the uterus and hypophasia of the suprarenal system. SIEBER.

Krasnopolsky: A Case of Full Term Extra-uterine Pregnancy with a Living Child (Ein Fall von Ausgetragener Extrauterin gravidität mit Lebendiger Frucht). *Russ. Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 225.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A primipara 31 years old had been married 18 years and had always been well. The menses ceased

after August, 1904. From the third month on, she suffered from abdominal pains. There was a discharge of amniotic fluid at the fifth month, according to the statements of a midwife. Foetal movements were first noted at either the sixth or the seventh month. At that time the pains became more severe and vomiting supervened. In October, 1905, a physician was consulted, who made the examination under anæsthesia because of the pain. The outlines of the uterus were not visible, but the small parts of the foetus were felt directly underneath the abdominal walls. The heart sounds were heard above the umbilicus. Amniotic fluid with vernix caseosa flowed from the cervix. The internal os was dilated and the uterus found empty. It was enlarged, however, corresponding in size to the third month of pregnancy. Upon opening the abdomen, the amniotic sac with a slight amount of fluid lay above the intestines and in it was found a partially asphyxiated, full term foetus. The gestation sac represented the enlarged tube wall from which the placenta was detached. The uterus was permeated with dense knots, hence was removed by supravaginal amputation. The mother's recovery was uneventful, but the child died fifteen hours later. The placenta weighed 553 gm. The membranes were torn at the uterine tubal os, which explains the discharge of amniotic fluid from the cervix.

GINSBERG.

Holländer: Full Term Pregnancy in an Accessory Tube of a Bicornate Uterus (Grossesse à terme développée dans une corne accessoire d'un utérus bicorne). *Arch. mens. d'obst. et de gynec.*, 1913, ii, 393.
By Journal de Chirurgie.

The pregnancy was the result of a peritoneal migration of the ovum and sperma, since the tissue uniting the normal tube to the accessory tube had no lumen and the corpus luteum was in the ovary on the opposite side. The normal tube was longer than usual, almost certainly because of gestational hypertrophy. The foetus had been dead for more than two months. There had been no casting off of placenta. The pains from which the patient suffered were probably due to the presence of adhesions with the appendix and the omentum. The differential diagnosis between intra-uterine pregnancy, intra-ligamentous pregnancy, and pregnancy in an accessory tube of a bicornate uterus was based upon the palpation of a normal uterus, of a right round ligament which was attached to the superior lateral portion of the tumor, and by the palpation of the wall and the form of the tumor and by the observation of uterine contraction.

L. CHEVRIER.

Siefert: Interstitial Pregnancy (Interstitielle Gravidität). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 375.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The author found forty cases in the literature of the extremely rare condition known as interstitial pregnancy. The condition is difficult to understand, since there is no sharp boundary between the uterus and tube. Thus pregnancies can be called interstitial only when the ovum is imbedded in that part of the tube which is within the uterine wall. This portion is only one centimeter long and by the growth of the ovum all boundaries are erased. French authors differentiate an utero-tubal and a tubo-uterine pregnancy.

The author diagnosticates an interstitial pregnancy by its relation to the round ligament. When the round ligament is lateral to the ovum an interstitial pregnancy is present.

The author reaches the following conclusions: (1) Inflammations of the adnexa comprise the chief etiological factor in ectopic gestation. (2) The case should be operated on as early as possible, because the patient may bleed to death from even the smallest perforations. (3) The diagnosis is difficult to make, on account of the few physical findings and the slowness of hæmorrhage. (4) The perforation is always found on the posterior convex surface of the tube and usually occurs in the second or third month. (5) No ectopic gestation of the interstitial type has ever been seen after the sixth month. (6) Vaginal operation is useless in these cases. HAUSER.

Gall: Pituglandol in the Treatment of Placenta Prævia (Pituglandol in der Behandlung der Placenta prævia). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 334.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

Gall recommends in cases of placenta prævia lateralis rupture of the amniotic sac and the injection of 2 cc. of pituglandol. In placenta prævia centralis he performs version, if the cervical dilatation permits, otherwise he introduces the metreurynter into the amniotic sac and immediately injects 2 cc. of pituglandol. As soon as the metreurynter is expelled, he performs version and again administers 2 cc. of pituglandol. The expulsion of the foetus in either instance is left to the labor pains which are increased by the drug. Nine cases, one of lateral and eight of central implantation, were treated according to these principles and six living children were delivered. In the other three cases, the foetal heart beats could not be elicited when the patient entered the hospital. One anæmic multipara died after version and extraction. KREBS.

Benthin: Carbohydrate Metabolism in Pregnancy and in Eclampsia; a Few Words Concerning Insufficiency of the Liver (Über den Kohlehydratstoffwechsel in der Gravidität und bei der Eklampsie; ein Beitrag zur Frage der Leberinsuffizienz). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 305.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The following conclusions may be drawn from the author's observations: Disturbances in carbohydrate

metabolism in pregnancy are only slight, as a rule. With regard to alterations in carbohydrate metabolism some influence must be attributed to the glands of internal secretion, as these produce a temporary disturbance of the physiological equilibrium. Of the toxæmias of pregnancy, eclampsia alone shows any considerable deviation from the normal, and manifests itself in the rapid increase of sugar in the blood, which is essentially conditioned by cramps. A material injury of the function of the liver is not to be assumed. Nevertheless, it should not be forgotten that functional disturbances of the liver in most cases do not manifest themselves until marked degeneration has set in. The absence of any differences whatever, during pregnancy, especially in those cases which are examined before the manifestation of eclampsia, therefore removes all grounds for assuming that functional disturbances of the liver are to be considered as an etiological factor in the development of eclampsia, so far as disturbances in metabolism of sugar come into question. The literature on the subject is discussed in detail. HIESS.

Chirlié: Researches on Puerperal Eclampsia (Recherches sur l'éclampsie puerpérale). *Epilepsia*, 1913, iv, 194.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The author reports on experimental investigations and describes the action of increased blood pressure in the kidney induced within ten minutes by a temporary ligation of the renal vein. Experiments conducted on twenty days corroborated the previously reported findings. The most important is the injury to the liver (necrosis of liver cells and kidneys). Poisonous substances, probably products of autolysis, immediately taken up into the circulation induce the clinical picture of puerperal eclampsia. From what organs these poisons are absorbed cannot be stated at present. Of the twenty-seven cases of eclampsia treated by venesection with drawing 700 to 1900 g. blood, three died. If he excludes the two moribund cases, a mortality of only 4 per cent is found. The author advises venesection for the treatment of eclampsia.

ENGELHORN.

Zinsser: The Toxicity of Urine during the Puerperium and in Eclampsia (Über die Toxizität des menschlichen Harnes im puerperalen Zustand und bei Eklampsie). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 481.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

Pfeiffer's experiments prove that the poisons in toxicosis, the result of albumen decomposition, are excreted by the kidney. Typical clinical pictures are produced by injecting such toxins into guinea-pigs.

Franz found the urine of healthy pregnant women to have no greater toxicity than that of ordinary urine. He also found that the toxicity increases during labor, that the urine during puerperium is

somewhat more toxic than it is during normal pregnancy, but less toxic than urine during labor. The urine of women with eclampsia is extremely toxic. This is true in those cases in which there is no damage to the kidney as well as those in which the kidney is affected. By determining the exact toxicity of the urine the author endeavors to fix a prognosis on an exact basis and to control therapeutic procedures.

The conflicting results of Franz and Esch led the author to repeat some of the experiments. Intra-peritoneal and intra-venous injections of urine of pregnant women, women in labor and in puerperium gave no clew to the presence of albumin decomposition (toxicosis) and his results agree with those of Esch. The results of intra-venous injections of urine from eclamptic women are: (1) it was impossible to kill an animal by intra-venous injections of eclamptic urine; (2) it was not possible to get a clinical picture of the effect of such injections; (3) the decrease in temperature had no direct relationship to the clinical progress of the disease. There was no characteristic type of temperature and the degree of damage done to the kidney had no direct bearing. (4) In no instance was it possible to get a clew to the presence of decomposed albumin. HERZOG.

Zappi: Consideration of the Treatment of Abortion (Considerazioni sul trattamento dell'aborto). *Clin. ostetr.*, 1913, xv, 130.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

On the basis of 244 cases from his own practice, the author adheres to the following principles: (1) In threatening spontaneous abortion, watchful expectancy. (2) In positively criminal cases or such in which the suspicion of criminal interference exists, immediate interference. (3) In spontaneous abortion in progress under favorable conditions (integrity of the product and good asepsis) watchful expectancy. (4) In opposite conditions, immediate interference. He advises instrumental curettment and states its advantages over the digital method. He concludes that his views will not be accepted by obstetricians working under ideal conditions in clinics and mentions the difficulties encountered in general practice, such as lack of trained assistance, unfavorable conditions, lack of intelligence on the part of patients, especially among the laboring class, one being compelled to proceed actively to shorten the period of disability. SCHMID.

Traugott: End Results of the Conservative Treatment of Streptococcus Abortion (Endresultate der konservativen Behandlung des Streptokokken-Abortus). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The bacteriological examination of the uterine lochia of all the cases of abortion has shown the correctness of placing the indications for treatment on bacteriological examinations according to the proposition previously made by the author. All of the clinically treated cases of abortion, in which any kind

of bacteria were found present in the uterine secretion, are divided into two groups: 1. Abortions with obligatory saprophytes (resorption fever, bacteriotoxic endometritis) which were always emptied by the hand without the use of instruments (246 cases recovered without any adnexal inflammations, metastases or deaths). 2. Abortions with streptococci, with hemolytic staphylococci and gonococci, in which conservative treatment reduced the morbidity, as compared with active treatment, from 14.1 per cent to 2.9 per cent and the mortality from 18.1 per cent to 2.2 per cent. The indications based on the bacteriological findings also hold good for afebrile abortions, the mortality being reduced by the conservative treatment from 7.5 per cent to 0.0 per cent.

Melnikoff and Zomakion: Pregnancy During Leucæmia and Its Influence on the Composition of the Blood (Schwangerschaft bei Leukämie und deren Einfluss auf die Blutzusammensetzung). *Russk. Vrach*, 1913, xii, 294.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient was 33 years old and suffered from leucæmia since 1908 which markedly improved after X-raying and internal treatment. In January, 1911, the raying was interrupted on account of nephritis and severe X-ray burns. Pregnancy occurred in May, 1911, and the patient was spontaneously delivered of a living child in February, 1912. The general condition of the patient became worse on the 10th day of the puerperium. Rise in temperature, loss of weight and enlargement of and pain in the spleen appeared. The patient was treated with radium, iron and arsenic. An improvement took place at the end of April, 1912. The results of the blood examination, since the beginning of the disease were tabulated. The hæmoglobin percentage decreased from 65 to 54 per cent before the occurrence of pregnancy and to 45 per cent during pregnancy. The number of red blood corpuscles fell from 3,364,000 or 4,000,000 to 2,800,000 or 3,000,000, while the leucocytes rose from 10,000-16,000 to 100,000-120,000. The differential count was 70 per cent to 75 per cent polynuclear neutrophiles, 1 per cent to 14 per cent myelocytes and large mononuclear cells with homogeneous protoplasm. During labor the hæmoglobin percentage grew to 55 per cent with 3,200,000 red blood corpuscles, the whites to 17,000, chiefly neutrophiles, while the number of eosinophiles and basophiles decreased. During the puerperium the hæmoglobin percentage rapidly sank from 55 per cent to 21 per cent and the number of red blood corpuscles from 3,200,000 to 1,800,000. At the same time poikilocytes, polychromatophiles, oligochromæmia and nucleated red blood corpuscles appeared. With improvement in the general state of health occurring during April, 1912, the hæmoglobin percentage increased to 45 per cent, the number of reds to 3,300,000, the number of white blood corpuscles was 93,300. The increase in the leucæmic character of the

blood during pregnancy was attributed by the author first to the tendency of the leucæmic blood to again adopt its former composition after the interruption of the X-ray treatment and secondly to the complication with pregnancy. A section through the entire thickness of the placenta shows on microscopic examination a characteristic picture. The blood in the vessels of the chorionic villi (fœtal blood) shows a normal behavior. The blood in the intervillous spaces (maternal blood) is typically leucæmic.

BRAUDE.

Albert: A Case of Severe Purulent Endometritis in Pregnancy (Schwere eitrige Endometritis in der Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Albert reports another case of severe purulent endometritis in pregnancy. A multipara, delivered spontaneously within three or four hours, was suddenly seized with eclamptic-like symptoms and died five hours after delivery. At the autopsy, the liver showed typical eclamptic changes and the kidneys a nephritis; otherwise no important changes. The genitals were removed in toto and immediately placed in formalin and later sectioned. The microscopic examination showed foci of suppurative disease of the decidua with numerous gram-positive diplococci. The diagnosis was suppurative endometritis intra-graviditatem, probably the cause of the nephritis and eclampsia. If this observation is correct, a complete revolution must occur in considering the etiology of the toxæmias of pregnancy, of some abortions, of premature labors and of many cases of puerperal fever.

Brongersma: Treatment of Pyelitis in the Pregnant (De behandeling van Pyelitis bij Zwangeren). *Nederl. Tijdschr. v. Geneesk.*, 1913, 1, 529.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Two cases of pyelitis during pregnancy are reported. The first one recovered after the daily use for 14 days of renal pelvis irrigations with a 3 per cent boric acid solution and 1 per cent silver nitrate solution. The second one had to be treated by permanent catheterization. The labors were normal in both cases, mothers and children remaining well. Brongersma arrives at the conclusion that in milder cases of nephritis complicated with pregnancy internal and dietetic treatment with lateral position on the healthy side and in the graver cases renal pelvis irrigation, eventually continuous catheterization, are indicated. However, nephrostomy and premature induction of labor are to be condemned.

STRATZ.

Green: Cholecystitis and Cholelithiasis Associated with Pregnancy. *Boston M. & S. J.*, 1913, clxviii, 679.

By Surg., Gynec. & Obst.

The author reports two cases and concludes that there seems to be a definite causal association of

cholecystitis and cholelithiasis with pregnancy. Symptoms due to either of these conditions may occur during pregnancy, during puerperium following labor at term, or after a miscarriage. The existence of gall-bladder disease is not in itself a cause of miscarriage, but miscarriage may induce the development of active symptoms from a process previously latent. Cholecystitis or cholelithiasis should receive the same surgical treatment and bear the same prognosis as in cases not associated with pregnancy.

C. H. DAVIS.

Vogt: Addison's Disease and Pregnancy (Morbus Addisonii und Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Clinically Addison's disease is difficultly diagnosed. Only two cases of Addison's disease and pregnancy which were confirmed by post-mortem examination have been reported in literature, one by Barlow and one by Vogt. The course of pregnancy was undisturbed and the adrenal disease did not grow worse. Labor was spontaneous and uncomplicated. Women suffering from Addison's disease are exposed to greater danger during early puerperium than during pregnancy and labor. The course of the disease in the puerperium is similar to that of secondary and pernicious anemia and in some cases of tuberculosis during pregnancy. It has not yet been decided whether death is due to insufficiency of the adrenal system or to tuberculosis of the adrenal glands. The existence of Addison's disease does not give an indication for an interruption of pregnancy, as pregnancy does not cause an advance of the disease. Our endeavor should be to save the child which may develop perfectly, as the prognosis for the mother is bad under all circumstances.

Drews: Pregnancy, Labor and Puerperium in a Case of Extensive Unilateral Teliangiectases and Varices Formation with Lymphatic Elephantiasis (Schwangerschaft, Geburt und Wochenbett bei ausgedehnter halbseitiger Teleangiectasie und Varicenbildung mit lymphangiectatischer Elephantiasis). *Berl. klin. Wchnschr.*, 1913, i, 779.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports the case of a primipara aged twenty-three, giving a detailed description of the changes on the body and showing a picture of the limb. He also renders a complete account of the pregnancy, labor and puerperium. During the puerperium the skin changes did not improve materially. Prophylaxis against thrombus formation is important in this stage (elevation of the affected limb, immediate movement and stimulation of the circulation, early rising and walking of the patient). He gives a complete review of the literature. In all published cases the abnormality dates back to birth and is aggravated during puberty and after trauma. The etiology is entirely unknown, but an involvement of the nervous system is probably present.

EISENBACH.

Mosbacher: Thyroid and Pregnancy (Klinisch experimentelle Beiträge zur Frage Thyreoidea und Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Pregnant animals abort when fed thyroid. Thyreoglandol causes uterus contractions in rabbits. When this reaction fails it can be brought out by previously giving adrenalin. Adrenalin activity is enhanced by doses of thyroid. Labor pains can be increased and strengthened by thyreoglandol which is combined with 0.2 adrenalin and gives similar results to pituitrin. Iodine in organic combinations can be demonstrated in eclamptic blood. Observations on a large number of animals deprived of thyroid lead Mosbacher to conclude that reproduction is not disturbed by loss of thyroids and parathyroids, if the animal is otherwise healthy. J. R. MILLER.

Graff: Thyroid and Pregnancy (Schilddrüse und Gestation). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Six hundred and fifty-four cases in the second half of pregnancy were examined. Enlargements of the thyroid were noted in three hundred and nineteen or 49 per cent; only twenty-one said the enlargement began in pregnancy, twenty-four said the tumor had been smaller and had increased more or less during pregnancy. Viennese women had enlargements in only 44 per cent of the cases. Five hundred non-pregnant women showed an enlargement of the thyroid to the extent of 40 per cent; hence pregnancy would account for only 9 per cent of the enlarged thyroids. During labor 35 per cent of the cases measured showed an increase in the neck circumference, of whom 60 per cent had no enlarged thyroid. Such enlargements recede in a few hours, but in a few cases there was no decrease, a fact noted by many women.

Spontaneous glycosuria was found in 38.8 per cent of five hundred puerperal women, 15.8 per cent with struma, 11.2 per cent without. A lowered tolerance for alimentary glycosuria was noted in 58 per cent as against 24 per cent of the cases with struma who had no struma. Albuminuria, however, occurs in 16.6 per cent and 22.1 per cent respectively. Eclampsia cases have enlargements of the thyroid less often than normal ones.

Ovary tablets had no action on the struma. In one hundred cases in the postclimacterium, two only noted enlargement of the thyroid in the climacterium. In one hundred and twelve myoma cases the thyroid was enlarged less frequently than normally, contrary to Freund. J. R. MILLER.

Aschner: Changes in the Pineal Glands in Pregnancy (Schwangerschaftsveränderungen der Zirbeldrüse). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Guinea pigs, rabbits, dogs and cats, were examined in pregnancy, after castration and in the normal state. In cats the vaginal gland is conical shaped,

whereas in pregnancy it is plumper and broader. After castration, atrophy takes place. Once pregnant, the animal never regains the typical cone shaped gland. Histological changes were not very characteristic. Aschner refers to similar work by Baisch and Hülles, and the observation of precocious sexual development in connection with tumors of the pineal glands described by Marburg and Frankl-Hochwart. J. R. MILLER.

Seitz: Disturbances of Metabolism in Pregnancy, Labor and the Puerperium (Die Störungen der inneren Sekretion in ihren Beziehungen zu Schwangerschaft, Geburt und Wochenbett). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

(a) Proteid. The thyroid, chromaffin system, hypophysis and ovary increase, and the pancreas and parathyroid decrease, proteid metabolism. In the second half of pregnancy there is a retention of proteid. In the puerperium there is at first a loss, then a retention occurs. Less urea is excreted in pregnancy but the ammonia, creatin, amino acids and polypeptids are increased. A liver insufficiency has not been proven but is possible. Sarcocollacid is secondarily increased in eclampsia. Placenta of the same species may cause anaphalaxis in the mother; foetal serum, however, does not. Not only the molecular proteid components, but diamino acids and amines, cause anaphalaxis, the former more generally toxic and paralyzing in its effect; the latter causing spastic symptoms. Clinically, there are two types of symptoms, the generally toxic and the spastic. At present it is impossible to separate disturbances in proteid metabolism into two groups, anaphalaxis and internal secretory disorders. The antitryptic ferment in the blood is increased in pregnancy, not specifically, however. Abderhalden's reaction is not absolutely specific and must be further tested in the clinic.

(b) Carbohydrate. The thyroid, hypophysis and chromaffin system increase the sugar metabolism; the pancreas and probably the ovary and parathyroid tend to check it. A light transitory glycosuria occurs in about 10 per cent of the pregnancies. A lasting glycosuria is rare. In pregnancy sugar appears more frequently in the urine after the ingestion of 100-150 gm. of grape sugar. Subcutaneous injections of adrenalin do not cause glycosuria more often in pregnancy. Lävuloseuria tests show only a slight decrease in the liver function. The sugar content of the blood is not increased in pregnancy, but is in labor. No carbohydrate disturbances appear in eclampsia. Diabetes mellitus influences menstruation in various ways: only 5 per cent of cases become pregnant. Diabetes cases are often made worse by pregnancy, probably due to the affection of the internal secretions; 30 per cent of the cases die in coma, and about 50 per cent of the children die in utero. Pregnancy should be interrupted in cases which become worse in spite of treatment.

(c) **Fat.** Pregnant women cannot catabolize fat as well as normally and acetonuria occurs more frequently. A decrease in the lipolytic serum ferment has not been shown. In the last six months of pregnancy there is a hyperlipæmia; both glycerin and cholesterolin fat are increased. In the puerperium, cholesterolin is excreted by the breasts. Functionating genital glands appear to decrease the cholesterolin formation; however, it is not justifiable to judge the function of the ovaries by the cholesterolin. It has not been shown definitely that an increase in cholesterolin in the blood favors the advance of tuberculosis in pregnancy. The increase of cholesterolin in eclampsia must be corroborated. The liquid body in the blood which causes the cobra reaction is increased in pregnancy, and also in carcinoma, lues, eclampsia and other conditions. Obesity is due to over-feeding, laziness, and also to disturbances of the internal secretory glands, especially the thyroid secretion. The removal of the genital glands predisposes to obesity. Obese persons, especially the endogenous type, are often sterile. No particular trouble is to be expected at labor.

(d) **Mineral.** The proof of a clear relation of mineral metabolism to the internal secretory glands is insufficient. There is still some doubt that calcium and phosphate metabolism is increased or that calcium is increased in the blood. Removal of the parathyroid seems to reduce calcium metabolism. The thyroid, hypophysis, thymus, and perhaps the parathyroid increase bone metabolism; the ovaries decrease it. The adrenals have no influence in this regard. A physiological osteomalacia in pregnancy has not been proven. In pregnancy calcium, phosphorus, and magnesium are retained. The body accomplishes this by better resorption, lessened excretion, and more economic metabolism. The hypophysis probably under the influence of the fetus, normally causes an increase in the bony development of the pelvis in pregnancy.

RELATION TO PREGNANCY OF THE INDIVIDUAL INTERNAL SECRETORY ORGANS, NORMALLY AND PATHOLOGICALLY.

Thyroid and pregnancy. The thyroid increases in size in 65-90 per cent of pregnancies, usually returning to normal in late puerperium. This is due to a hypertrophy and hyperplasia of the secretory tissue. Puberty and menstrual enlargements are due to an ovarian hormone. Pregnancy hypertrophy of the thyroid is brought about by placental substances; castration hypertrophy is a complementary reaction. The thyrogenic theory of eclampsia is untenable; proof is likewise lacking for its connection with hypermesis and puerperal psychoses.

Basedow's disease and pregnancy. Light forms of hyperthyreosis are common in women. Psychasthenia and chlorosis should not be confused with it. The thymus is often affected at the same time, a persistent thymus being a serious complica-

tion. The chromaffin system is altered in hyperthyreosis. Vasomotor and other sympathetic groups are more sensitive. Sympatheticotropic individuals are more affected than vagotropic; the ovarian function is usually not disturbed in Basedow's disease; if at all, it is reduced and these patients are more often sterile. In 40 per cent of the hyperthyreosis cases no changes occur in pregnancy; in 60 per cent of combined statistics the condition is made worse. Pregnancy is not to be reckoned as specifically injurious. Premature birth and abortion are seen more often than in non-pregnant women. Statistics give 6.4 per cent mortality for pregnancy in hyperthyreosis, heart injury, persistent thymus, and general intoxication causing the deaths. Abortion was performed in 4 per cent and premature labor induced in 8 per cent. Atonic hæmorrhage occurred in 7 per cent of the cases, caused by decreased coagulability of the blood. Children are little endangered, but can inherit a neuropathic anlage.

Consent to marry is to be withheld in bad cases. In light cases delay should be urged till improvement takes place. Every hyperthyreosis must receive general treatment. If the condition grows worse, strumectomy and not abortion is indicated.

Struma and pregnancy. Struma is usually enlarged in pregnancy; only a few, however, cause compression symptoms. If this occurs strumectomy is indicated. If the child is viable, the choice lies between strumectomy and induction of labor. Most of the compression symptoms recede after birth. In 52 cases of strumectomy in pregnancy, the maternal mortality was 2 per cent; in 6 per cent pregnancy was interrupted.

Parathyroid and pregnancy. The parathyroid seems to be connected with calcium metabolism. No morphological changes in the gland during pregnancy have been shown. In the last months and especially in labor, the galvanic excitability of the nerves is increased, this indicating similar changes to those seen in tetany. Patients with asthma or parathesias in the extremities should be tested for galvanic excitability: the condition may possibly be a latent tetany or parathyreotoxicosis. The tetany of pregnancy is rare. Those reported in the last fifteen years are almost all in pregnancy and not in lactation. This condition is probably a parathyroid insufficiency, as these glands have increased work to do in pregnancy. In tetany of pregnancy injuries of other internal secretory glands are found, and the disease is very severe, especially attacking the respiratory muscles. The mortality is 7 per cent. The therapy should be parathyroidin and calcium. When the respiration is seriously threatened, pregnancy should be interrupted, although this often does not give results. Eclampsia is not dependent on these glands.

Thymus and pregnancy. Persistence of the thymus may simulate Basedow's disease. The chief symptoms are heart disturbances and lymphocytosis. The ovary exerts an antagonistic influence over the thymus. A persistent thymus is said to grow smaller

in pregnancy. More attention should be paid to status lymphaticus.

Hypophysis and pregnancy. The anterior lobe of the hypophysis regularly undergoes considerable hypertrophy in pregnancy, and is due to an enlargement and increase in the chief cells with their transformation into the so-called pregnancy cells. Resection of the whole gland in animals causes cessation of genital growth and injury to the fully developed ovaries. Further work is necessary to corroborate Aschner's work, that the hypophysis is absolutely necessary for the existence of pregnancy. The increase of the anterior lobe probably assists in the growth of the pelvis and perhaps of the pregnant uterus. Marked hypertrophy in pregnancy may lead to cerebral symptoms. Symptoms of acromegaly occasionally occur, such as enlargement of the hands and feet and the typical acromegaly can begin in pregnancy (Marek). Acromegaly usually leads to amenorrhœa and sterility but if pregnancy occurs it need not be interrupted. The posterior lobe has up to now shown no hypertrophy in pregnancy. Pituitrin from the posterior lobe increases the labor pains if already present. Pituitrin is chemically closely related to B. imidazolylathylamin.

Adrenal and pregnancy. The adrenal in pregnancy undergoes hypertrophy in the fascicular and reticular parts of its cortex. The occurrence of vacuoles and the increased pigment in the reticular cells means increased secretion. Changes in the cortex in toxæmias of pregnancy need to be studied further. The cortex contains more cholesterol than normal, indicating that it is the seat of the lipidæmia. The medulla hypertrophies little if any. The adrenals are absolutely necessary for conception, pregnancy and labor pains. The proof of an increased amount of adrenalin in the blood in pregnancy is insufficient. The pigmentation of pregnancy is probably connected with the increased adrenal function. In Addison's disease, ovarian function is disturbed, and sterility is the rule. Tuberculosis is responsible for the serious effect of pregnancy in Addison's disease.

Ovary and pregnancy. The internal secretion of the ovary protects the development of the female characteristics. The corpus luteum probably (Born Fränkel) starts menstruation, and prevents further ovulation; it also is very important for the implantation of the ovum. One should examine cases of habitual abortion for irregular corpus luteum growth. Its function lasts only during the first month of pregnancy; later in pregnancy the interstitial glands develop. They probably work synergetically with the corpus luteum, and, by analogy with the interstitial glands in the male, probably govern the sexual desire. Changes of the interstitial glands in pregnancy are stimulated by placental villi. The pathological overgrowth of villi in moles and chorio-epithelioma bring about lutein cysts. Ovulation ceases in pregnancy as a rule. The relation of corpus luteum to hyperemesis is unexplained.

Osteomalacia and internal secretion. Osteomalacia shows changes in muscle and nerves as well as in the bones. Animals with calcium free diet do not present the real picture of an osteomalacia. Calcium and phosphorus experiments have not given clear results. Castration cures 87 per cent and in the puerperium 93 per cent improve. Definite morphological changes in the ovary have not been proven. Clinically the disease is due to a hyperfunction of the ovary. Disturbances of other glands of internal secretion often occur and predispose to osteomalacia. Hönnicke's hyperthyroid theory is untenable. Osteomalacia has not been produced by resection of the adrenals, yet adrenalin cures 24 per cent and improves 50 per cent of the cases. Evidently the ovary and chromaffin system are antagonistic. The disease may be due to a decreased chromaffin activity (Christofoletti). The parathyroids show a hyperplasia, and tetany often occurs together with osteomalacia. Phosphorus treatment cures 62-78 per cent. Exogenous factors play an etiological rôle only.

Mammary glands and pregnancy. Growth of the breast is influenced by a hormone, the nerve reflex theory being untenable. Puberty hypertrophy and the menstrual changes are governed by the internal secretion of the ovary. The hypertrophy of pregnancy can be artificially produced by the injections of embryological tissue and of placenta. The breast and ovary are antagonists. Outside of this, no internal secretion has been proved for the mammary gland. Cholesterol ester is excreted with milk. The relation of eclampsia to the mammary internal secretion is not clear, and analogy with cattle paralysis is not to be accepted.

Placenta. The placenta is an organ of internal secretion producing (a) changes in other glands in pregnancy; (b) chorio-epithelioma and moles in association with lutein cysts in ovaries; (c) changes in the breasts of pregnant women and in the breasts and uterus of the new-born. Further action by means of deported villi, causing ferment and anaphalactic reaction, is now being worked out.

J. R. MILLER.

Kreiss: Heart Lesions in Pregnancy (Herzfehler und Schwangerschaft). *Deutsche Gesellschaft f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Among 23,577 labors, pregnancy was interrupted 26 times for vitium cordis, (16 times for mitral insufficiency and stenosis, 3 times for diseases of the aorta and 7 times for myocarditis) with 2 deaths—0.008 per cent. Light cases should be treated with rest and control of the heart and sp. gr. of the urine. If the symptoms do not disappear in two days or when broken compensation is present, give medical treatment. If œdema, cyanosis and urine of high sp. gr. continue, interrupt pregnancy. The condition is complicated with nephritis, struma, etc., in one half of the cases. Classical Cæsar section is to be preferred to the vaginal. J. R. MILLER.

Aschner: Albuminuria in Pregnancy (Untersuchungen über die Schwangerschaftsalbuminurie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

Aschner examined, by means of Abderhalden's serum reaction, the urinary albumin of pregnancy, nephritis and eclampsia. The eclampsia albumin is digested by pregnant serum. Eclampsia serum does not digest the eclamptic albumin as well as the pregnancy albuminuria product, corresponding thus with the placenta reaction. Thus the albumin of pregnancy toxæmias differs from that of nephritis.

J. R. MILLER.

Baisch: Researches Concerning the after Life of Pregnancies Complicated by Heart and Kidney Lesions (Untersuchungen über das spätere Schicksal herz- und nierenkranker Schwangerer). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

The author examined 205 heart and 250 kidney cases as well as 450 cases of "pregnancy kidney" occurring in the last 12 years among 21,000 births. The kidney of pregnancy presents no complications. Nephritis of pregnancy occurred in 226 cases, 1.7 per cent; 57 per cent of these were eclamptic. Only one of the complicated nephritis cases died, due to myocardial degeneration, 40 per cent went through normal pregnancies, 21 per cent of the children were dead and the rest premature. Operative labor was necessary in 55 per cent and premature separation of the placenta often occurs. In 120 nephritic cases which were controlled, 9 died in the first year, 6 out of 60 eclampsia cases died and 10 per cent remained invalids. In 13 cases of Bright's disease, 4 died in the clinic and 2 during the next year. Interruption of pregnancy is indicated in chronic nephritis, but in acute nephritis a viable child can be awaited. Two hundred women with valvular lesions developed decompensation, one fourth of them serious; 5 died during labor and 3 in the following year. Of the controlled cases 50 per cent were well, 45 per cent were invalids and 5 per cent were dead and a third of the children were premature. Five out of 9 cases of myocarditis died in labor and 2 the following year. Atonic hæmorrhage occurred in 40 per cent of all heart cases. Myocarditis or heart lesions complicated by nephritis are indications to interrupt pregnancy.

J. R. MILLER.

Schlayer: The Interruption of Pregnancy in Diseases of the Kidneys (Schwangerschaftsunterbrechung bei Nierenerkrankung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The differentiation of the kidney of pregnancy from a genuine nephritis, according to the author, is misleading, and in many cases impossible. He questions the advisability of making a clinical entity of the former. He believes a better working basis is obtained by differentiating the nephritides accord-

ing to their influence upon the organism, as valuable conclusions may then be drawn as to when an interruption of pregnancy is justified.

Schlayer lays down the indication for and against abortion and premature labor. He employs the simple method of observing the daily excretion of the kidney on a definite diet, by which definite conclusions in regard to the diseased kidney can be drawn. This method will also show that a seemingly harmless kidney of pregnancy, in spite of the disappearance of albumen, has not recovered entirely, but has only become latent. Baisch's conclusions are identical with those of the author, that kidney changes of pregnancy more frequently result in permanent kidney disease than heretofore supposed.

Fuchs: Bilateral Ovariectomy during Pregnancy (Doppelseitige Ovariectomie in der Schwangerschaft). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 525.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A multiparous patient whose last menses began Sept. 20th was operated on Nov. 7th for the removal of bilateral pseudo-mucinous papillary cystadenoma. Pregnancy was uninterrupted three months after operation. The author advises the removal of both ovaries in all cases of papillary tumors during pregnancy, even though one ovary appears perfectly healthy macroscopically, unless the patient, to whom the matter has been thoroughly explained, is decided-ly against castration.

ZINSSER.

LABOR AND ITS COMPLICATIONS

Esch: How Many Full Term Children in Cephalic Presentation Pass the Inlet Spontaneously in Flat Pelves and are Born Alive (Wie viele ausgetragene Kinder passieren beim platten Becken in Schädellage spontan den Beckeneingang und kommen lebend zur Welt)? *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The usual contrast between spontaneous births and those terminated by operation does not permit reliable conclusions to be drawn as regards the influence of flat pelves. This contrast is also unsatisfactory from a therapeutic standpoint, as the indications for operative interferences in cases of flat pelvis, excluding funnel pelvis, are the same as in the normal pelvis. Hence Esch chose the normal cephalic presentation to answer the above question, the mechanical influence of flat pelves being the most favorable in this presentation. Only such cases of his own and of the literature were considered which were treated expectantly until danger to the child arose. In cases with a conjugata vera of 10 to 9.6 cm. 1137 (96.2 per cent) children passed the inlet spontaneously; in cases with a vera of 8.5 to 7.6 cm. 487 (74.7 per cent) children entered spontaneously, and in cases with a vera of 7.5 to 6.5 cm. only 20 (14.9 per cent) entered spontaneously.

Esch draws the conclusion that the curve thus obtained represents the results of cephalic presenta-

tions in flat pelvis most accurately. He advises the use of the curve, especially for teaching purposes.

Treub: Breech Presentations in the Amsterdam Clinic for Women from 1902-1911 (De stuitliggingen in de Amsterdamsche Vrouwenkliniek van 1902 tot en met 1911). *Nederl. Tijdschr. v. Verlosk. en Gynaec.*, Haarlem, 1913, xxii, 103.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

With regard to the opinion of Van der Hoeven, who rejects the external prophylactic version in breech presentations, being in favor of watchful expectancy until extrusion of the sacrum, Treub has reviewed his material on this question. In the last ten years, out of 5,832 births, 214 were breech, from which 33 twins and one birth of triplets are subtracted. This gives a percentage of 3.7 per cent. There were 95 full term babies, 74 premature children, and 22 macerated. Of the full term babies, 65 were from multiparæ and 30 from primiparæ. Of the 65 multipara children, six died soon after birth and two later, giving a mortality of 12.5 per cent. Of the primipara children, 6 died soon after birth and 1 later, leaving a mortality of 24 per cent.

In 177 cases out of 214, the external version was performed and in 14 it was not successful. There were three cases in which the child would have died without a version. Extraction was done in 6 cases, and all the babies lived. In 12 cases which were spontaneous up to the sacrum, all babies were dead or deeply asphyxiated. Van der Hoeven's smaller statistics show better results but do not prove the correctness of the method but merely that his series of cases was more successful. Treub still is a firm adherent of the external version and also the extraction by one foot.

STRATZ.

Björkenheim: Case of Rupture of Vaginal Fornix during Labor (Zur Kasuistik der Kolpaporrhesis sub partu). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 269.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The case was a woman, 37 years old, octapara. Preceding labors were normal and easy. Last menstruation occurred September, 1910. State of health during pregnancy was good. Labor commenced the afternoon of June 2, 1911; rupture of sac during succeeding night. Strong bearing down pains occurred during the entire night; decrease in strength and frequency toward morning. The uterine os was completely dilated. Child's head was large, and freely movable above the pelvic inlet. As the fetal heart sounds were irregular and weak, repeated but unsuccessful attempts at delivery by forceps were made. Version and extraction of the child succeeded easily. The head passed with the greatest difficulty through the upper pelvic aperture. The child was dead and was not weighed; fracture of the clavicles and dislocation of cervical vertebrae. After waiting one half hour the physician made vain attempts to express the placenta by Crédé. The uterus was well contracted and unusually small. Attempts were made to deliver placenta manually.

The hand was introduced into the vagina and attempted to reach the placenta along the umbilical cord. The hand entered a large cavity to the left of the empty uterus. The placenta was not reached but the hand felt intestinal loops through the opening. Tamponing of the vagina with gauze. General condition good. There was not a sign of severe hæmorrhage. The patient was transported by horse and wagon 20 km. and made a trip on the railroad of one hour to Helsingfors. Her general condition was quite good; no elevation of temperature; pulse strong, not accelerated. The umbilical cord led into the left vaginal wall, the left parametrium, and thence into the abdominal cavity. There was left lateral and anterior rupture of vaginal fornix (colpaporrhesis). Extraction of the placenta by umbilical cord without any marked loss of blood; ether anæsthesia; laparotomy; longitudinal incision. A wound 10 cm. long was found in the peritoneum in the plica vesico uterina at the junction of vagina and uterus extending from before to the left side of the vagina. The vagina, whose anterior wall was torn from the cervix to the extent of about 6 cm., communicated with the abdominal cavity. He then sutured the vagina to the cervix, the peritoneal tear. The parametrium was packed with iodoform gauze toward the vagina. The abdominal incision was closed in three rows with gauze drain in the lower portion of the wound. Perfect healing resulted. Convalescence was disturbed by a right sided exudative pleurisy. The patient was discharged, cured.

HARM.

PUERPERIUM AND ITS COMPLICATIONS

Loofs: A Contribution to the Etiology of Late Hæmorrhages in the Puerperium (Beitrag zur Ätiologie der Spätblutungen im Wochenbett). *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 225.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author discusses three cases of sudden hæmorrhages in the late puerperium with a pronounced tendency to recurrence. One of the cases was personally observed by him; the second occurred in the practice of Veit, and the third has been reported by Moosen. All three cases were due to rupture of a large arterial vessel by trauma during labor. The tissues surrounding the wound were closed either by suturing or spontaneous healing, yet the vessels remained open. A pseudo-aneurism gradually formed beneath the freshly healed wound edges as a result of hæmorrhage from the open arteries. Increasing pressure caused a rupture of the freshly healed wound at a time when the patient was evidently recovering. The repeated hæmorrhages finally led to death.

The clinical course of these cases is therefore characterized by hæmorrhages occurring unexpectedly in the late puerperium, followed by an interval of complete arrest of the bleeding. The resisting powers of the tissues gradually decrease due to exsanguination. An inclination towards infection of the

stagnated blood and the thrombi appeared. Finally death resulted from anæmia. The only treatment indicated is extirpation of the uterus as soon as possible after the first recurrent hæmorrhage.

JAEGER.

Zangemeister: Inversion of Uterus in Puerperium (Über puerperale Uterusinversion). *München med. Wchnschr.*, 1913, lx, 616.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Inversion of the uterus in puerperium occurs once in 400,000 births, three times as frequently in primipara as in multipara, and ten times as frequently at full term as in premature births. Too early expression of the placenta and pulling on the cord are the most common etiological factors. Predisposing causes are short cord, precipitate labor, operative procedures, and adherent placenta. Occasionally an inversion occurs spontaneously. Inversion sometimes occurs without symptoms. Usually is accompanied by severe shock, and uterine hæmorrhage. Septic infection occurs in 2 per cent. The mortality is 16 per cent. Treatment is as follows: Combat hæmorrhage and shock; then replace uterus. In uncomplicated cases of inversion, a tampon or colpeurynter is placed in vagina, and a tight external compression is applied. In twelve to twenty-four hours the uterus is replaced manually, the hand removed, ergot given, the uterus massaged. Three per cent of cases are reduced spontaneously. Operative interference is indicated when reduction is impossible or when complications occur.

RUNGE.

Zinke: A Critical Review of the Medical and Surgical Treatment of Puerperal Eclampsia. *Lancet-Clin.*, 1913, cix, 603.

By Surg., Gynec. & Obst.

The treatment of eclampsia demands not only a deliberate and thorough consideration of its pathology, course and prognosis, but also a study of the results of the various methods of treatment which have been employed in the past as well as those of to-day. About 30 per cent of all eclamptic cases develop during labor, 50 per cent during the 8th and 9th month of pregnancy, and perhaps 15 per cent succeed labor. The severity, duration and frequency of the convulsions vary, depending upon the character and extent of the changes in the maternal organism. The latter occur in the brain, cord, liver and kidneys. The lesions in the brain and cord are anæmia or plethora, œdema and hæmorrhagic exudates. The changes in the liver and kidneys are not inflammatory but degenerative in character and consist of cloudy swelling, fatty degeneration and necrosis of the secreting glandular epithelium. The convoluted tubules are affected in the kidneys, the acini in the liver. Hæmorrhages may occur in the periphery of the acini, and thrombi form within the inter and intra-acinous branches of the portal vein. All the changes found within the body of the eclamptic dead indicate the presence of a poison or poisons.

Eclampsia is an autointoxication, due to an imperfect elimination of effete elements. This means an insufficient action of some or all the emunctories of the body, but more especially of the kidneys and liver.

Not knowing the character of the toxins which cause the convulsions, we can only solve the question of treatment by looking for an answer in the history not of the patient but of the disease. All authorities agree that in the majority of cases eclampsia results either from renal insufficiency, from acute yellow atrophy of the liver, or cerebral apoplexy. This explains the prognosis. If kidney insufficiency is the cause the patient may recover, if acute yellow atrophy of the liver or extravasation of serum or blood into the brain or spinal cord, the patient almost invariably succumbs.

The foetal mortality in eclampsia depends in large measure upon the period of gestation and the manner and time of delivery after the onset of the disease. Premature birth, version and extraction and *accouchement forcé* are frequent causes of the death of the child. Even with the new methods of treatment, especially vaginal and abdominal hysterotomy and Bossi dilatation, the foetal mortality remains high—30 to 40 per cent.

Author then points to the fallacies of emptying the uterus by surgical means as recommended by Halbertsma, Bumm, Peterson, McPherson and Davis. The treatment of eclampsia would be simple if the conclusions of these authors were correct. Peterson collected a total of 2135 cases of eclampsia; in 47.3 per cent the convulsions continued after operative treatment. In those cases where the convulsions ceased after delivery the mortality was 18.4 per cent, while in the cases where the convulsions continued the mortality numbered 28.4 per cent. The author then refers to his 30 cases treated medically only. The maternal mortality is 13.3 per cent, the foetal 46.6 per cent. Ballantyne reported 29 cases with a mortality of 17.2 per cent, Fern 10 cases with a mortality of 10 per cent; Rushmore collected 88 cases with a mortality of 20.4 per cent and Stroganoff reports 400 cases with a mortality of only 6.6 per cent. Thus the collective maternal mortality of the medical care of eclampsia of these five authors is only 12 per cent.

The result of the decapsulation of the kidneys for the relief and care of eclampsia in 98 cases is, according to Poten, as follows: No attacks after decapsulation 42 times with 15 deaths; one to 6 attacks after decapsulation 27 times with 10 deaths; 7 to 10 attacks after decapsulation 4 times with 3 deaths; 11 and more attacks after decapsulation 4 times with 0 deaths; indefinite number of attacks after decapsulation 21 times with 10 deaths. In the total of 98 surgical operations the maternal mortality is 38 or 37.76 per cent. In Cæsarean section there is a mortality of 27 per cent and with strictly medical treatment a maternal mortality of only 12 per cent. These figures speak for themselves and the conclusion is that surgery has contributed

little, indeed almost nothing, to the reduction of the maternal mortality from puerperal eclampsia. Assist labor but do not induce it, or treat the convulsions and let pregnancy take care of itself, is still good teaching. The author then considers the medical treatment of puerperal eclampsia which is divided into a prophylactic treatment and curative treatment.

He sums up the curative treatment in the following points: 1. The hypodermic administration of 1 cc. of Norwood's tincture of veratrum veride, repeated hourly until the pulse is reduced to 60 per minute or less. 2. Copious enemata of soap-suds is given to wash out the large intestines; the bladder is catheterized; a saline cathartic is administered as soon as the patient is able to swallow. 3. Hot baths or packs not oftener than twice a day. 4. Milk, broth, water or Fischer's solution may be freely administered, the latter being given per rectum or, if the case be an urgent one, intravenously. 5. Chloral per os or per rectum is given if the patient is restless. 6. If the patient is at the end of the first stage of labor, and then only if the symptoms are grave, may forceps be employed to terminate labor. If the first stage is not complete or if labor has not begun, and the patient has improved under the treatment above mentioned, the case is left to nature. 7. In cases of anæmia or asthenia from any cause normal saline solution or Fischer's solution is given per rectum or intravenously. 8. In the presence of any condition, maternal or foetal, which makes the birth of the child *per viam naturalis* hazardous or impossible, abdominal or vaginal Cæsarean section, or deep cervical incisions, each depending upon the period of gestation and other circumstances, are justifiable. HENRY SCHMITZ.

MISCELLANEOUS

Dědek: The Origin of Respiratory Movements in the Fœtus (Zur Frange der Entstehung der Atmungsbewegungen beim menschlichen Fœtus). *Lék. rozhledy*, 1913, ii, 91.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author gives a résumé of the literature concerning the origin of the first respiratory movements of the new-born. He describes the periodic intra-uterine respiratory movements of Ahlfeld, and thinks there is an intimate relationship between them and the regular recurring respiratory rhythms of the child after birth. The author, using the kymograph, has found that the respiration of the premature child corresponds intimately to the periodic intra-uterine respiratory movements of Ahlfeld while the respiration of the full term child resembles that of the adult more closely. The author considers the periodic intra-uterine rhythmic respiratory movements as an expression of primary automatic ability of the respiratory center and that the first extra-uterine and the following regularly recurring respirations are the end results of intra-uterine development of the respiratory apparatus. PRŮŠKA.

Kawasoye: The Influence of the X-Rays on the Foetal Membranes (Über die Einwirkung der Röntgenstrahlen auf die Eihäute). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 488.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The diversified opinions of the harmful action of X-rays on the products of gestation induced the author to determine on pregnant guinea pigs, whether pathological changes could be produced in the foetal membranes by one or two applications of X-rays, as is done for diagnostic purposes in pregnant women. The necrotic foci which are histologically found in the decidua must be considered as physiologic, because they could also be demonstrated in the control animals which had not been X-rayed. Although a characteristic change could not be found in the gestation membranes and in the uterine walls, damage to the pregnancy by the X-raying was apparent. In seven cases an abortion was observed in the uterus three times, a dead foetus once and a macerated foetus once. The harmful action of the X-rays is also apparent in the necrotic areas in the foetal liver and spleen. HOLSTE.

Aulhorn: Demonstration of a Fœtus with a Solid Embryoma of Coccyx (Demonstration eines Fœtus mit Steissteratom). *München. med. Wchnschr.*, 1913, lx, 667.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A primipara, 28 years old, was in the sixth month of pregnancy. Labor began spontaneously. A tumor could be felt extending upward four inches above the navel. Traction on the head of the foetus caused a voluminous discharge of an opaque fluid. The foetus was delivered with the exception of the breech when a tumor appeared almost the size of a child's head. The foetus was macerated and showed the following anomalies: At the posterior pelvic wall behind the anus and genitalia broad shreds and strands of tissue are attached which continue into the skin of the foetus. These are remnants of the ruptured capsule of the cystic portion of the tumor. To it is attached the solid portion of the tumor almost as large as a child's head. The placenta is twice as large as it should have been considering the duration of the gestation. According to the microscopic findings this tumor must be considered as an embryoma. Its unusual size is remarkable, the chief reason for the wrong diagnosis. RUNGE.

Trinchese: The Time when Luetic Infection Occurs in the Fœtus and Its Clinical Significance (Über den Zeitpunkt der lueticchen Infektion des Fœtus und dessen Klinische Bedeutung). *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 201.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author presupposes that a paternal infection does not occur and that an early infection of the foetus is hardly probable. On that account the organism must enter the foetus body in its later period, undoubtedly during the latter half of preg-

nancy. He takes the stand, and corroborates it with several observations, that lues is not a cause for abortion. According to his view there are always other causes for the abortion present, such as diseases of the endometrium and malpositions of the uterus. Neither can the death of the fœtus due to lues cause an abortion, as spirochetes have never been found in them. Also, in cases of premature labor the rôle of lues is important, being rare in living children and usually only in those born in the seventh month of gestation.

Two thirds of the luetic children are born during the last three months of pregnancy, and most of them in the eighth month; this percentage being considerably lower toward the end of gestation. Only 5.3 per cent of luetic fœtuses are carried to term, most of these are born alive and show the typical signs of congenital syphilis. Fœtal lues begins and ends in approximately 80 or 90 per cent of the cases during intra-uterine life, occurring in advance pregnancy as a rule. Hence 58.3 per cent of dead luetic fœtuses are born between the eighth and tenth months. The child can only be saved through energetic mercury treatment of the mother, success resulting then only if treatment is instituted before fœtal infection occurs. Therefore, acute syphilitic treatment should be instituted in all suspicious cases as soon as the diagnosis of pregnancy is made. Even if it is begun as late as the middle of pregnancy it may yet be life-saving. BAYER.

Soldin: A Case of Delayed Meconium Expulsion (Über einen Fall von verzögertem Meconium-Abgang). *Jahrb. f. Kinderheilk.*, 1913, lxxvii, 453. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A complete retention of meconium existed until the fifth day after birth, during which time all food taken by mouth was immediately vomited, and the child lost weight rapidly. Enemata were given without result and operative interference was declined by the parents. After four days and eight hours there occurred spontaneous evacuation of a large amount of meconium, in which two glass-like mucous plugs of grayish green color were found. Immediate improvement and increase in weight followed. The meconium retention did not present the picture of a severe obstipation but rather that of complete obstruction. The author considers the mucous plugs the cause of the obstruction. The site of formation of the mucous plugs is considered in this case to be the cæcal region. EISENBACH.

Schlimpert: Experience with the Abderhalden Reaction (Erfahrungen mit der Abderhaldenschen Schwangerschaftsreaktion). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Sera from pregnant, non-pregnant, carcinomatous, or other patients should be examined together. In doubtful cases a diagnosis is only to be made when all control sera are correctly diagnosed. Uterine, ovarian, myomatous, and carcinomatous tissue was not digested by the pregnant serum in nineteen

cases. Using different animal placenta, with similar and heterogeneous sera, the results were as follows: Fifty-eight cases, in which sheep placenta was used, were correctly diagnosed in all but one instance. Twelve horse sera with horse placenta gave correct diagnosis in every case. Two pregnant horses gave sera which digested horse placenta. Since the horse placenta have no chorionic villi, the deportation of villi (Veit) cannot be responsible for the blood reaction. Human pregnant serum often digests animal placenta, the reverse being seldom true. J. R. MILLER.

Peters: Concerning Schottländer's Publications on the Determination of the Length of Pregnancy by Means of Histological Examination of the Placenta (Zur Publikation Schottländers "Über die Bestimmung der Schwangerschaftsdauer auf Grund histologischer Placentarbefunde und über etwaige praktische Verwertbarkeit dieser Befunde"). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 373. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The pressure of nucleated red blood corpuscles in the fœtal blood vessels between the first and third months has long been a method of diagnosing the age of the egg. Further the presence of villi, the histology of the epithelium of the chorionic villi, together with the size of the egg would indicate whether two months had been passed since conception. From six months on histological findings of placenta are no longer a method of diagnosing the age of the fœtus. Langhans cells begin to disappear from the chorionic membrane at the 15th week, from the villi at the 17th week, but do not completely disappear from the chorionic membrane for many weeks. Therefore, this is of no value in differential diagnosis. Thus there is left the period between the 15th-17th week, and Peters said it was absolutely impossible to make a definite diagnosis of this period by the examination of the placenta. Even if one could do so it would be of little value. BAYER.

Bar: Surgical Treatment of Hæmorrhages of Pregnancy, Labor and the Puerperium (Die chirurgische Behandlung der Schwangerschafts, Geburts und Nachgeburtsblutungen). *Gynäk. Rundschau*, 1913, vii, 163.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Bar shows by statistics how far and in which cases immediate surgical interference can replace the ordinary obstetrical methods. He cites 153 cases of abnormal implantation of the placenta and 4 cases delivered spontaneously despite profuse bleeding with no other treatment. There were ten cases of accouchement force, three delivered with forceps, without loss of mother or child. Six cases of version gave a maternal mortality of 16.66 per cent; one case required craniotomy.

The author then takes up cases in which hæmorrhage was treated primarily by tamponade of vagina, alone or in combination with other methods, by rupture of the bag of waters, by rupture of the bag of waters and colpeuryisis, and by rupture of the

bag of waters with Braxton-Hicks version. The mortality in cases of rupture of the bag of waters, without vaginal tamponade, was 5.88 per cent for the mother, 44.11 per cent for the child. The mortality in sixteen cases where the bag of waters was ruptured followed by version and extraction was 6.25 per cent for the mother, and 75 per cent for the child; following rupture of the bag of waters and forceps the mortality was nil. In thirty-four cases in which the bag of waters was ruptured and a metreurynter inserted the maternal mortality was 5.88 per cent; foetal, 38.23 per cent. Following rupture of the bag of waters with metreurynter and version, the mortality of the mother was 12.12 per cent; of the child, 60.60 per cent. In one case, in which the bag of waters was ruptured and a metreurynter inserted, extraction was done by the forceps, and both mother and child died. Rupture of the bag of waters, with insertion of a colplurynter and craniotomy, was followed by no maternal mortality. There were two cases in which the placenta was punctured and a foot pulled down, both the mothers being saved, and both babes lost. In six cases there was manual dilatation of the cervix; in three cases, dilatation of the cervix with Brossi's dilators, version and extraction, with a maternal mortality of 0, a foetal mortality of 66.66 per cent. Thus the total maternal mortality was 9.2 per cent; the foetal, 51.63 per cent. These results are not satisfactory. The 14 maternal deaths were the result of infection in ten cases and four cases were due to hæmorrhage.

In order to shorten labor on account of hæmorrhage, one should proceed vaginally in all cases that are infected. One should operate abdominally only when there is no sign of infection or when extirpation of the uterus has been determined upon. In thirteen cases of severe retro-placental hæmorrhage, Bar reports four deaths; one due to hæmorrhage, two to emboli, one to infection. Bar thinks that postpartem hæmorrhage, due to an atonic uterus, seldom needs surgical intervention. Cervical tears should be repaired; if this is impossible, the vagina should be tamponed. If hæmorrhage continues, the patient should be laparotomized, and the injured vessels ligated.

HOFSTÄTTER.

Slemons: Is Albuminuria Likely to Recur in Subsequent Pregnancies? *Am. J. Obst.*, N. Y., 1913, lxvii, 849.

By Surg., Gynec. & Obst.

Slemons finds that about one out of every five or six women who have a high grade albuminuria in the first pregnancy suffer from an auto-intoxication in the second. In order to distinguish between those

who may expect a recurrence from those who probably will not have any trouble, he believes something may be learned from a careful observation of the sort of recovery which the patient makes. If the albumin is reduced to a faint trace during the first week of the puerperium, it is certain that there is no permanent defect in the kidney and that the outlook for normal conditions in future pregnancies is excellent. On the other hand, a measurable amount of albumin persisting for six or eight weeks offers a very gloomy prognosis even if it ultimately disappears entirely. He believes a more valuable opinion may be gained from an inquiry into the blood pressure findings of these women during their convalescence. Those cases with high blood-pressure which return to normal pressure during the course of two weeks, he considers have had an eclamptic instead of a nephritic toxæmia and are unlikely to experience a recurrence.

Where the blood-pressure remains high for some time, however, some permanent damage to the kidney may be presumed and trouble in subsequent pregnancies anticipated.

N. SPROAT HEANEY.

Colle: Action of Placental Extract upon the Vascular System and upon Blood Coagulation (Azione degli estratti di placenta sul sistema cardiovascolare e sulla coagulazione del sangue). *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 394.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author experimented upon cats with an extract made from the placenta of cats, guinea pigs, cows, and women by crushing and extracting with physiologic salt solution. His conclusions are as follows: 1. With pure or weakly diluted extracts (1-2 to 1-10) a rise in the blood pressure occurs, with an increase in the force of the systole without influence of the rate. 2. With more highly diluted extracts (1-30 to 1-1000) decrease in blood pressure and pulse tension results. 3. Extract of placental previously washed with normal salt solution is more active than an extract from a placenta not previously washed. 4. With pure or weakly diluted blood extract blood coagulation is hastened, with highly diluted extract it is delayed. 5. With boiled extract filtered cold, blood pressure is slightly raised, followed by a short period of lowered pressure. 6. The action is not constant, and in human beings sometimes without action, but occasionally toxic, even in dilutions. 7. The rapidity of injection is important; if rapidly injected it may act fatally. 8. A tolerance is possible; if the concentration be gradually increased the animal will tolerate large doses.

BERBERICH.

GENITO-URINARY SURGERY

KIDNEY AND URETER

Nowicki: The Relation Between the Chromaffin Substance and Adrenalin in the Suprarenal Capsules (*O stosunku chromaffiny do adrenaliny w naderzach*). *Przegl. chir. i ginek.*, 1913, viii, 169.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The majority of authors assume that the adrenalin is elaborated in the cells of the medulla, is stored up there and also distributed from there. This process probably occurs in the "feochromic" cells. The object of the investigations was to determine if the chromaffin substance bore any relation to the adrenalin content, if its absence or increase could be utilized to determine hypo- or hyper-function of the suprarenals. A decrease in the chromaffin substance was produced by a long-continued chloroform anæsthesia and bilateral nephrectomy. Suprarenals of dead animals were also used. The organ was measured, weighed, put in Müller's solution and heated in the usual manner. Watery extracts were prepared, with 1 cc. of solution to 0.1 cc. of the weight of the gland. The tests were conducted upon guinea pigs, according to the method of Lävén-Trendelenburg. Each experiment was accurately recorded. The results of the experiments prove that between the quantity, the grouping and pigmentation of the chromaffin substance on the one hand and the action of the extracts on the other, there is a definite relationship. Histologically, it is also possible to determine the approximate adrenalin content by the behavior of the chromaffin substance.

WERTHEIM.

Lobenhoffer: The Physiology of Kidney Innervation (*Physiologisches über Niereninnervation*). *Deutscher chir. Kong.*, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Lobenhoffer emphasizes the fact that up to this time our knowledge of the dependence of the kidney on the nervous system has not been at all exact. The previously accepted teaching has been that the work of the kidney was regulated by nervous stimuli which are transmitted to it from centers in the brain or spinal cord through the many nerve fibers which enter the hilus of the kidney with the blood vessels. This view originated and was supported by the fact that the kidney secretion nearly always stopped after section of these nerves; also from the effects of stimulation of certain areas in the central nervous system and the peripheral stumps of the kidney nerves. In many experiments, the author seemed to see a contradiction to this teaching. Transplantation by suturing the vessels offered the best means for making physiological tests. The kidney

was transplanted to the pedicle of the spleen. It was then removed completely from all external nervous influence, but was kept in a normal living state. The other kidney was removed. The fact that animals with such kidneys remained alive a long time (he kept dogs under observation for nine months and one year) decided the question definitely.

By the aid of histological and physiological examination, he found that the granulations of the protoplasm, which is an index of the secretory activity of the kidney cells, corresponded completely to the picture in the normal kidney. Thus, there was no change on account of the severed connection with the central nervous system. With experiments on diuresis and secretion, he tried to test the activity of the tubular and vascular parts of the kidney substance. The water and salt output, and also the elimination of foreign substances, such as indigo-carmin, milk sugar and phloridzin, were entirely normal as shown by the curves. The transplanted organs were also able to withstand overloading. Hence it was shown that the kidney can carry out all its physiological functions by itself and that it is a much more independent organ than hitherto believed.

Diuresis, especially, can only take place normally through the active functioning of the contractile elements of the blood vessels. This is undoubtedly caused by nervous stimulation, which must arise in the kidney itself, and can only come from the renal plexus, which has long been known to anatomists but not heretofore considered much by physiologists. The nerves entering the hilus have efferent tracts with regulatory functions, but no tracts with secretory fibers.

Abell: Renal and Urethral Calculi. *Ky. M. J.*, 1913, xi, 406.
By Surg., Gynec. & Ost.

This paper is based on the author's personal experience in 24 cases of renal and ureteral calculi. Hæmaturia was present in 21; typical renal colic in 17; urinary frequency in 11; pyuria in 10. X-ray plates were taken in 19 cases, showing calculi in 17. The plates were negative in 2 cases where calculi were subsequently found. Spontaneous expulsion of calculi occurred in 6 cases. A careful determination of renal efficiency was made in each case. The author believes that primary stones, small enough to permit of traversing natural channels, are to be kept under X-ray observation at regular intervals until passed; abundant diuresis will hasten their passage. When impacted in ureters it is often possible to dislodge them with the ureteral catheter, and their expulsion may be facilitated by the injection of olive oil into the ureter. Large primary stones

should always be removed by appropriate operation; even in the absence of distress their presence constitutes a menace from possible obstruction, infection, and anuria.

HENRY L. SANFORD.

Barkley: Subparietal Rupture of the Kidney, with Report of Cases. *Lancet-Clin.*, 1913, cix, 475.

The kidney is more often ruptured than any organ below the diaphragm, the uterus not excepted. The rupture is usually transverse but may be vertical, oblique, stellate, or pulpified. The peritoneal cavity is often exposed when the injury is on the anterior surface and in children. Subparietal rupture has a higher mortality than a gunshot wound of same organ. In grave but uncomplicated cases there is mortality 25 or 30 per cent when treated expectantly; in operative treatment when delayed it is much higher and when complicated and treated expectantly the mortality is 91 per cent. In considering the prognosis the possibility of injury to other organs can not always be eliminated. The mortality in simple cases treated by pack, drain or suture is 5.5 per cent; the same treatment in complicated cases gives 40 per cent mortality. Nephrectomy in simple cases has a mortality of about 23 per cent and in complicated cases over 40 per cent.

Subparietal rupture of the kidney occurs oftener than one would suppose from reading modern textbooks on surgery. It is seen most frequently between tenth and fortieth year and on the right side. Pain, hæmaturia and shock, while usually present, may not supervene immediately upon receipt of injury, and in some severe cases are entirely absent. Urinary symptoms may vary considerably and normal renal function is not restored for some time after the wound has healed. In many cases it is impossible to differentiate by clinical symptoms slight from extensive rupture. The absence of evidence of serious injury should be established before temporizing or the expectant plan of treatment is employed. In cases of doubt early exploratory incision is the logical surgical procedure. In infected cases lumbar incision and drainage or nephrectomy give the best results. Suture of the kidney parenchyma in clean cases gives excellent results. In cases not complicated with other injury, death is usually the result of shock, hæmorrhage, or sepsis.

Voelcker: Dilatation and Infection of the Renal Pelvis (Über dilatation und Infektion des Nierenbeckens). *Ztschr. f. urol. Chir.*, Leipz., 1913, i, 112. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Under normal conditions the renal pelves are completely emptied at each contraction of the ureters. The demonstration of retained urine in the renal pelvis under pathological conditions becomes of the greatest importance for the determination of the anatomical and functional condition of the kidney and the renal pelvis. Two things must, first of all, be distinguished—the residual urine in the renal pelvis, and the pelvic capacity. Changes in the

latter only take place gradually and require long periods of time, owing to the slight elasticity of the walls of the renal pelvis. The "anatomical" renal pelvis, again, must be distinguished from the "surgical," which represents the sum of the hollow system; i. e., renal pelvis plus the renal calyces. The capacity of the "surgical" renal pelvis, which is normally 4-6 cc., can be determined by filling it, after previous evacuation, by means of a ureteral catheter. For a staining liquid collargol is used. The moment the pelvis is filled is indicated by the occurrence of pain in the region of the respective kidney and by the presence of collargol in the bladder.

This method of demonstrating the conditions of dilatation and retention is supplemented by pyelography (röntgenography of the kidney after filling with a 3-5 per cent solution of collargol). This shows not only the position of the kidney, the size and any possible dilatation of the renal pelvis, but also reveals abscesses, cavities, kinks, curvatures and dilatations of the ureters. The collargol should be cold and free from gross particles. The respective kidney should first be completely emptied and then completely filled. The normal renal pelvis is usually empty and resists artificial filling. Pyelograms of the normal renal pelvis are, therefore, indistinct and present faint outlines. Hence, distinct contours in themselves are an indication of the first degree of dilatation.

The following forms of dilatation are to be distinguished: (1) Dilatation of the "anatomical" renal pelvis alone; (2) of the "anatomical" renal pelvis and the calyces; (3) of the renal calyces alone. The primary dilatation (pyelectasy, nephrectasy and hydronephrosis) is caused by mechanical obstructions to drainage; by contrast the primary infection pyelogram shows no dilatations in the first stage. If the infection persists for some length of time, swelling of the mucous membranes of the renal pelvis and the ureters leads to dilatation of only the renal calyces. At a still later stage, abscesses are formed in the renal parenchyma, the so-called primary cavernous pyonephrosis or infection-pyonephrosis. From this must be distinguished the secondary or dilatation-pyonephrosis, which arises from chronic infection of an aseptic primary dilatation. An intermediate form is represented by the combined pyonephrosis, which results from a somewhat more marked aseptic primary dilatation with subsequent permanent closure. Clinically, this form is characterized by a marked septic condition; pathologically by a marked dilatation of the "anatomical" renal pelvis and a pelvis filled with pus, by cavernous abscesses in the parenchyma. If the infection affects an already dilated renal pelvis, dilatation-pyelitis results, which is characterized by a permanent pyuria and pains as in colic. The infection of a healthy renal pelvis, on the other hand, is designated as infection-pyelitis. This arises from bacteriuria; the urine, during the intervals between the intermittent attacks, is free of pus but contains

many bacteria. The attacks appear cyclically and frequently without material pains in the kidneys or colic, while the general condition is good.

Therapeutically, in dilatation-pyelitis, irrigation of the renal pelvis by instillation of silver nitrate or collargol deserves chief consideration. Since in infection-pyelitis this procedure generally produces no results, it is better to resort to vaccine therapy.

FRIES.

Guénu: Symptoms of Intestinal Occlusion in Nephritic Colic (Des symptômes d'occlusion intestinale dans la colique néphrétique). *Bull. méd.*, 1913, xxvii, 207.
By *Journal de Chirurgie*.

During a nephritic colic with frequent attacks of pain followed by intervals of complete relief, atony and paralysis of the intestines are apt to occur. In some cases this paralysis causes only a slight distention of the abdomen but in others there is marked meteorism which may persist for some time or may recur after several days. This last condition often makes it very difficult for the physician or surgeon to reach an exact diagnosis. A surgeon recently suffered from such an attack.

This surgeon, who was subject to renal crises, had a series of attacks in which there was no nausea or vomiting and no radiation of pain along the ureters or into the testicles but severe gastro-intestinal cramps. These attacks, two in number, were accompanied by complete inertia of the bowel; no gas or feces were passed for three days after the first attack and for two after the second. At first it was thought the trouble was secondary to some pleuro-phrenic affection which involved the stomach and intestines. But the persistent suppression of gas and the great distention of the abdomen caused the attending clinicians and the patient to suspect the presence of some obstruction. Operation was advised, though the typical signs of obstruction were absent and, after the painful attacks, there was no change in the facial expression.

The patient passed some gas shortly before the time set for operation, and the next day the meteorism disappeared, the abdomen relaxed and there was no more pain. The following day some sand was found in the morning specimen of urine. Urinalysis which showed many large uric acid crystals and 0.819 parts of uric acid to the litre and a slight trace of albumin, pointed the way to the correct diagnosis. That night there was a slight attack of pain lasting one half hour and in the morning a stone apparently formed of uric acid and about the size of an apple seed was found in the urine. After this except for some vague passing sensations in the lumbar region there were no attacks of pain and the patient was able to take nourishment. There was no further trouble in the intestines.

Guénu found three other unpublished cases which were analogous. Gosset, Moutier and Dreyfus saw these and thought operative intervention equally indicated.

The explanation of the intestinal symptoms is explained by the fact that the renal plexus arises from the aortico-renal ganglions which are part of the solar plexus. Reflexes traveling from the renal plexus may stimulate or paralyze the intestinal branches of the sympathetic system as well as those going to the spermatic plexus.

What is the real cause of the symptoms in such cases of apparent intestinal obstruction? According to Guénu a careful analysis of the pain is necessary. The intensity of the pain is disproportional to the condition of the abdomen and in occlusion it is due to the contraction of the weak intestinal muscle. In renal crises the pain is the first thing noticed and it rapidly reaches its maximum intensity. The retention of gas and meteorism are not noticed till later and although the patient suffers considerably, that "visceral anguish" which is always present in real obstruction is absent. The symptoms of abdominal inertia predominate as is shown by the absence of colicky pains between the renal attacks and by the absence of noises and rumblings. Finally the palpation of the abdomen between crises in false ileus, unless there is distention, is slightly or not at all painful.

In all cases of lumbo-abdominal pain, a careful urinalysis should be made searching especially for gross or microscopic uric acid and oxalate crystals. The blood should be examined for uric acid chemically.

In the treatment of such cases purgatives are not always successful. The best method seems to be to remove the causes which lead to intestinal inertia. The renal pain is controlled by subcutaneous injection of morphine in quantities sufficient to produce complete relaxation. This seems to be the most effective treatment.

J. DUMONT.

Dienst: The Structure and Histogenesis of Congenital Kidney Neoplasms (Über den Bau und die Histogenese der angeborenen Nierengeschwülste). *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, 45.
By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

A congenital tumor of the right kidney obtained from a 30 cm. fetus born dead is the basis of this report. The tumor was the size of a hen's egg, with no normal kidney tissue remaining. The diagnosis of adenomyosarcoma was demonstrated macroscopically. The tumor belongs to the group of embryonal adenosarcomata described by Birch-Hirschfeld. To explain the presence of muscle cells in these tumors the author accepts the hypothesis of Wilms: "One must assume that at the time when differentiation of the kidney anlage from the primary mesodermal plate occurs, a few cells of the muscle anlage and sclerodermal anlage are through some unknown disturbance included with the kidney anlage, and continue their growth in a tumor-like manner, and that the highly irritated embryonal kidney cells likewise continue their unchecked growth in a tumor-like manner." BLANCK.

Speese: Perirenal Hæmatoma. *Surg., Gynec. & Obst.*, 1913, xvi, 570. By Surg., Gynec. & Obst.

The author describes a case of perirenal hæmatoma, twenty-one cases of this disease having been recorded. The patient, aged 43, developed a chill, followed by malaise. Several days later there was a sudden and acute pain in the right hypochondrium, followed by the appearance of a tumor in the same region. The patient developed pallor, shock, and a temperature of 101° . The urine contained a small number of red blood cells, and functional tests disclosed diminution in secretory activity of the right kidney. The operation, exploratory in nature, revealed a perirenal blood effusion which infiltrated the fatty capsule, and stripped the fibrous capsule from the kidney. The outer surface of the kidney contained an irregular tear. Nephrectomy was performed, followed by recovery. The histological examination of the kidney showed a chronic nephritis, the only lesion demonstrable and presumably the underlying cause of the hæmorrhage.

The following conclusions may be drawn from the study of this case and those collected from the literature:

1. Perirenal hæmorrhage is caused by tuberculosis, abscess or tumors of the kidney, necrosis of the adrenal gland, traumatism and occasionally occurs in hæmophilia. The spontaneous form is probably due to chronic nephritis, the only pathological lesion which has been demonstrated.

2. The characteristic symptoms of the disease are sudden pain, signs of internal hæmorrhage, and the formation of a retroperitoneal tumor.

3. A moderate degree of hæmaturia is present in one third of the cases. Functional tests show diminution in the secretory activity.

4. The affection is most commonly mistaken for intestinal obstruction or paranephritic abscess.

5. The disease pursues a rapid course if unrelieved, death resulting from hæmorrhage, infection, or pulmonary complications.

6. Medical treatment has been uniformly unsuccessful.

7. Ten of the sixteen cases operated upon have recovered (62 per cent). The mortality of the twenty-one cases treated by both surgical and medical measures is 52.5 per cent.

Furniss: Preliminary Report upon the Use of Indigo-carmin Intravenously as a Test of Renal Function. *Surg., Gynec. & Obst.*, 1913, xvi, 567. By Surg., Gynec. & Obst.

Furniss advocates the use of indigo-carmin in a strength of 0.3 per cent in normal saline solution intravenously, preferring this method to the intramuscular because there is less pain, and the time of appearance in the urine is shorter and more uniform as the variable time of absorption from the muscles is eliminated. He has seen no difference in the time of appearance, whether 5 or 10 cc. is used. This has ranged from $2\frac{1}{2}$ to 7 minutes, with $3\frac{1}{2}$ as the average. The indigo-carmin test is

made to determine the relative functional value of the kidneys after estimation of the combined value with phenolsulphonephthalein.

Joseph: Acute Septic Infection of the Kidney and Its Surgical Treatment. *Urol. & Cutan. Rev.*, 1913, xvii, 189. By Surg., Gynec. & Obst.

In this article Joseph divides all cases into three groups, according to the localization of the focus: paranephritic abscess, pyelonephritis, pyelitis.

Genuine paranephritic abscess, he says, is a relatively harmless localized form of general pyemia, the portal of entry of which may still be evident or have healed. The diagnostic features are the absolute lack of involvement of the kidney and the presence of a circumscribed area of tenderness on pressure over the kidney region. If the latter symptom is present, together with fever otherwise not accounted for, one must not wait for other signs, such as redness or fluctuation which appear only at a late period of the evolution of the disease, but must immediately resort to exploratory incision, even if the urine is normal. This incision will be the whole treatment, if the paranephritic abscess is not complicated by kidney suppuration which, however, happens often. A case is reported.

In pyelonephritis—that is, in diffuse infection of the kidney parenchyma—the vital question is, Is there only an inflammatory infiltration, or is pus already present? In the first case, expectant treatment may suffice; in the second, prompt surgical interference is needed. Two cases are reported; one recovered without operation; the second was treated by nephrotomy; three years later a difficult secondary nephrectomy was done on account of persistent pain, and the kidney was very markedly altered. Primary nephrectomy would have been better in this case.

Pyelitis is easy to diagnose and yields to a simple, non-operative treatment. FAXTON E. GARDNER.

Lapeyre: Renal Function after Decapsulation of the Kidney (La fonction rénale après la décapsulation du rein). *J. de physiol. et de pathol. gen.*, 1913, xv, 241. By Journal de Chirurgie.

Renal decapsulation, as practiced in the treatment of uræmia and eclampsia, has up to the present lacked an experimental basis as a therapeutic measure. Lapeyre has studied the elimination of the decapsulated kidney as compared to the untouched kidney of the opposite side. He has studied their comparative permeability to fluoresceïn and to potassium ferrocyanide, as well as the diuresis caused by intravenous injections of isotonic and hypertonic solutions of sodium chloride, glucose, and urea. The method employed by Lapeyre consisted in the decapsulation of one of a dog's kidneys, followed by bilateral ureterostomy. The operative procedures in themselves resulted in minimal apparent changes in the urinary secretion. Albumin and sugar were observed in 62 per cent of the sixteen cases, but disappeared by the end of twenty-

four hours. After the injection of fluorescein and of potassium ferrocyanide, Lapeyre found that the elimination of each of these two substances was practically the same for the decapsulated and the untouched kidney, no matter how long a period had elapsed between the decapsulation and the application of the functional test. The amounts injected were first, .005 gm. of fluorescein in 10 cc. of .9 per cent NaCl; and, second, .05 gm. of potassium ferrocyanide in 10 cc. of NaCl.

Likewise, after intravenous injection of isotonic solutions of sodium chloride urea or glucose the polyuria and the elimination of these substances were approximately equal from the two kidneys. Hypertonic solutions also yielded the same results. These experimental results show that decapsulation has at least no harmful effect on the function of the sound kidney.

The author believes that in cases of nephritis one may legitimately suppose that the decompression of the organ, by permitting of a freer circulation and of the more ready formation of omental vascular adhesions, has a beneficial effect on renal functions.

PIERRE CRUET.

Pascual: Contribution to the Study of Calculi of the Intra-Parietal Portion of the Ureter
(Contribution à l'étude des calculs de la portion intra-pariétale de l'uretère). *J. d'Urol.*, 1913, iii, 447.
By Journal de Chirurgie.

Calculi of the intra-parietal portion of the ureter are relatively frequent (17 per cent, Jeanbrau), the narrowing at the ureteral meatus favoring their arrest at this point. They may produce either complete obliteration of the ureter or, on the contrary, a cystic dilatation of its lower end, or two rather characteristic lesions: prolapsus of the ureteral zone or bullous oedema of this zone.

Prolapsus of the ureteral zone, or intravesical dilatation of the lower end of the ureter (which should not be confused with prolapsus of the ureteral mucosa), presents itself under the form of a conical projection into the bladder, on whose rounded summit may be seen the ureteral orifice, or even the calculus, engaged in this orifice. When far advanced, the prolapsus may constitute an intravesical diverticulum containing numerous calculi.

Oedema of the ureteral zone is usually a bullous oedema which may arrive at such considerable proportions as to simulate a real tumor.

The calculi of the intravesical portion yield variable symptoms. The more frequent of these are vesical, resembling those of cystitis, frequency, dysuria, pain at the meatus, cloudy urine, occasionally a few drops of blood. Cystitis, prostatitis, even renal tuberculosis, are simulated. Young has observed seminal phenomena (nocturnal emissions), testicular (pain in the testicle on the corresponding side); rectal (chronic pain in the rectum, increased at the moment of defecation). Pascual, however, believes that these symptoms are more characteristic of calculi of the juxtavesical portion of the ureter.

Cystoscopy usually gives definite findings: enormous oedema, usually bullous, localized about the ureteral meatus, or prolapsus of the ureteral zone, very often with the calculus itself filling in the ureteral orifice.

The presence in the anamnesis of definite renal colic without expulsion of the calculus, and with vesical symptoms, is of great value. Vaginal palpation may yield definite information: ureteral tenderness, presence of a hard body. Rectal examination is less valuable because of the obstacle furnished by the presence of the prostate.

Ureteral catheterization may yield proof of an obstruction, but frequently the sound passes easily alongside of the calculus, and hence a negative result cannot be taken to rule out the presence of stone. Radiography is the most valuable diagnostic method. Repeated plates and the employment of the opaque ureteral sound are often necessary. The exact diagnosis of the site of the calculus—intramural or juxtavesical—is extremely important in determining the type of operation, which is transvesical in the first case and laterovesical in the second. The existence of prolapsus, or of oedema, weigh in favor of an intra-parietal situation of the calculus, but radiography is the more exact method of determining this point. If there is no tendency to spontaneous expulsion of the calculus, its operative removal is indicated, since it leads to progressive destruction of the corresponding kidney. The perineal route is rarely indicated. The vaginal route may be utilized if the calculus is definitely perceptible through the vagina. In women the endovesical route might be selected advantageously. In many cases it would permit of either the dilatation of the ureter, or of the incision of the ureteral orifice, or of the direct seizure or crushing of the stone. The transvesical route is always indicated in men and in women where an attempt by the endovesical route has been unsuccessful. It allows of an easy extraction of the calculus after, or without, enlargement of the ureteral orifice. J. TANTON.

Furniss: Impacted Ureteral Calculi Released by Fulguration. *J. Am. M. Ass.*, 1913, lx, 1534.

By Surg., Gynec. & Obst.

The author reports the case of a woman of 49 with frequent urination pain in right loin and pus and blood in urine for three months. Eleven years ago she had a transient similar attack. A poor X-ray failed to show shadows. Cystoscopy showed a mass in region of right ureter the size of pigeon's egg surrounded by bullous oedema. The ureter was not seen.

The mass could be felt through the vagina and it was supposed to be a broad-based papilloma, probably malignant. Two applications were made with the D'Arsonval current. One week after the last cauterization a large black calculus was seen protruding through the mass. The patient refused operative treatment at that time. When seen six months later there was a history of numerous

attacks of lumbar pain. Cystoscopy showed two stones free in bladder. The right ureter appeared the size of lead pencil and the oedematous mass had entirely disappeared. The author suggests high frequency cauterization as a simple and bloodless method of releasing calculi from the lower end of the ureter when there is no haste from ureteral obstruction. About a week is required for the tissue to slough. Errors of diagnosis may be avoided by means of a good radiograph. F. R. O'NEIL.

Green: Infections of the Upper Urinary Tract in Infancy and Childhood. *Boston M. & S. J.*, 1913, clxviii, 645. By Surg., Gynec. & Obst.

The author gives a short review of the literature on the subject and reports six cases to further illustrate the infections of the upper urinary tract. Case 1 is that of a girl, 11 years old, who had an appendiceal abscess. Seventeen days after the operation she developed the typical signs of a kidney involvement: pain, tenderness, spasm and fulness in the right costo-vertebral angle. The diagnosis was acute secondary infection of the right kidney, hæmatogenous in origin. The kidney capsule was laid open and drainage established. The patient recovered. Case 2, the patient was a girl, 12 years old, who had an obscure general infection but was operated for appendicitis. Three days following the operation she developed a temperature with no local signs of infection. Two weeks later albumin and blood appeared in the urine. There was tenderness over the left kidney. She was operated in the same manner as Case 1, and she made a steady convalescence, being discharged five weeks later. Case 3 was a boy 9 years old who had a severe osteomyelitis of the ileum with metastatic epiphysitis of the tibia. He developed a metastatic nephritis. No kidney operation was performed in this case, no reason being mentioned why it was omitted. The patient was treated medicinally and recovered. Case 4 was that of a boy 7 years old who developed an acute inflammatory nephritis and pyelitis following a balano-posthitis. The early symptoms were those of an acute pyelonephritis, followed later by acute appendicitis. The child recovered completely after removal and drainage of the appendix. Case 5 was that of a boy, 3 years old, who developed an empyema following pneumonia. Ten days following a rib resection he developed an acute inflammatory nephritis. This cleared up in a few days under rest and medicinal treatment. Case 6 is that of a girl, 12 years old, who entered the hospital with a perinephritic abscess and also some involvement of the kidney itself. The abscess was opened and the patient recovered shortly after.

The author comes to the following conclusions:

1. In infants and children infections of the upper urinary tract, though infrequent, are likely to occur without adequate apparent antecedent cause.
2. Their onset is acute, the clinical picture definite, and their recognition often missed on account of simulating other infectious conditions.

3. The two most usual forms are acute pyelitis and acute inflammatory nephritis.

4. The latter is most usually hæmatogenous in origin; the former probably proceeds by lymphatic extension from the intestine.

5. Predisposing causes are calculi, constipation, phimosis, anal fissures, and foci of infection elsewhere.

6. The classic signs of both are pyrexia, pyuria and tenderness in the cost-overtebral angle.

7. Differential diagnosis depends on examination of the urine.

8. The treatment consists in rest, milk diet, aqueous diuresis, moderate catharsis, urotropin with sodium benzoate, potassium citrate or vaccine in obstinate cases; surgery only as a final measure.

EDWARD L. CORNELL.

Pawloff: Accessory Ureters (Über akzessorische Harnleiter). *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 425.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports six cases of double ureter. In one case the double ureters of both sides communicated with each other in the intramural part through a small opening. In five cases double ureters existed on only one side. In three cases the ureters remained separate throughout the entire course. The clinical histories present interesting characteristics which are detailed in the original article. The author was able to collect from the literature six cases of double ureter diagnosed by means of the cystoscope (Stark, Selig, Klose, Unterberg, Nemenon). From the literature it is evident that double ureters, on account of their constant tendency to cross each other, produce a condition which predisposes to renal diseases. These diseases are dealt with by resection of the part affected or by removal of the kidney.

VON LICHTENBERG.

BLADDER, URETHRA, AND PENIS

Louveau: Therapeutic Fistulization of the Bladder (Sur la fistulisation thérapeutique de la vessie). *J. de méd. de Bordeaux*, 1913, xliii, No. 7.

By Journal de Chirurgie.

Louveau gives his personal results in twenty-five cases in which a permanent bladder fistula has been made; 17 of these had painful cystitis, acute or chronic; 5 a bladder or prostatic tumor; one a uretero-rectal fistula. In 7 cases the cystitis was due to tuberculosis, leucoplasia, or bichloride or cantharides poisoning. Many of these cases were immediately relieved. In 3 cases of chronic cystitis, prostatic or kidney in origin, there was no relief. A suprapubic fistula was made 19 times; a vaginal fistula 3 times and once a combination of the two. In cases not reacting to this treatment there is contraction and sclerosis of the bladder.

ORAISON reports three cases of permanent fistula with brilliant results. In one case of primary tuberculosis of the bladder the relief was marked.

J. DUMONT.



Fig. 1. (Bonamy and Dartigues.) Excision of the diseased parts.

Bonamy and Dartigues: Technique of External Genitoplasty in the Male (*Technique opératoire de la génito-plastie masculine externe*). *Presse med.*, Par., 1913, xxi, 93. By *Journal de Chirurgie*.

The authors have successfully applied the technique they describe in a case where there was an elephantiasis-like condition of the whole cutaneous covering of the external genitalia, which the microscope showed to be a diffuse lymphangioma. Total emasculation had been advised by other surgeons.

This procedure combines exeresis and plastic repair. It consists of three main steps: (1) excision of the diseased parts (peno-scrotal decortication); (2) making of a new scrotum with an opening for the stripped penis; (3) ensheathing of the penis by means of two lateral skin flaps.

Peno-scrotal decortication is carried out as follows: The skin incisions outline a four-sided figure. The upper incision is horizontal and crosses anteriorly the symphysis pubis above the root of the penis; the lower is parallel with, and about an inch above, the lower border of the scrotum. The lateral incisions are both vertical and unite the ends of the upper and lower cuts. An additional incision is drawn lengthwise in the dorsal midline of the penis from the middle of the upper incision to the urinary meatus. To decorticate the penis, the surgeon introduces in the urethra a Hegar dilator to act as a guide; this is better than a catheter which might

let urine trickle on the operative field. With dissection forceps and knife the right and left sides, and, finally, the under surface, of the penis are stripped of the diseased skin. To do the same to the anterior part of the scrotum, a vulsellum or bullet forceps is placed in each of the upper angles of the scrotal flap, while a third holds the tip of the loosened penile flap. The left hand of the surgeon grasps these three forceps together and pulls them downward between the thighs, while an assistant draws the penis upward, out of the way, in front of the pubis, and holds it there. The testicles enclosed in the fibrous layer and vaginalis are next brought out. If healthy, they are left alone; if diseased, castration, on one or both sides, is performed. If hydrocele is present, the vaginalis is resected.

The making of a new scrotum is simply effected by bringing up the edge of the lower, pre-scrotal, incision on a level with the upper, prepubic, incision. Of course, the new scrotum is much less roomy than the old one. The lateral ends of the scrotal and prepubic edges are temporarily approximated by means of two bullet forceps, while there remains in the middle a gap through which passes the stripped penis. A longitudinal incision, two or two and one half inches long, is then made with a knife in the median scrotal raphé itself, one and one half or two inches below the line where the two above-mentioned edges will be sutured together. Through this



Fig. 2. (Bonamy and Dartigues.) Making new scrotum with an opening for stripped penis.

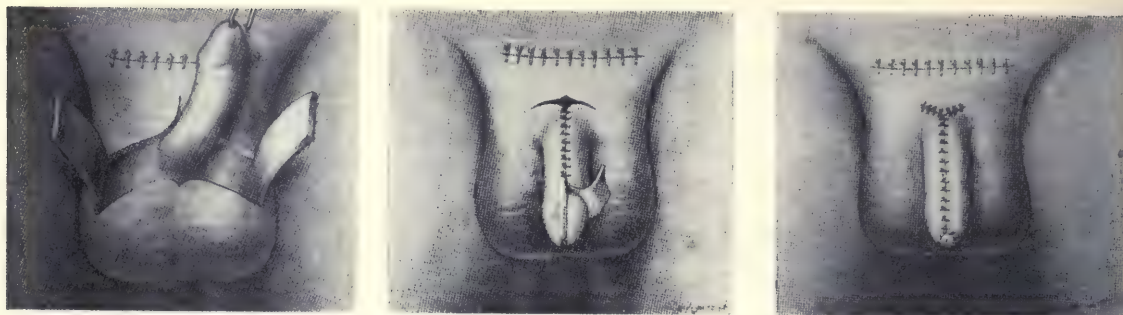


Fig. 3. (Bonamy and Dartigues.) Ensheathing penis by means of two lateral skin flaps.

incision, lips of which are spread apart by the two arms of a thumb forceps, which the surgeon works with his right hand, the penis is grasped with another forceps held in the left hand and brought down through the slit. It is then left hanging downward; the scrotal and prepubic edges are sutured with linen or silkworm gut.

It remains to provide a new skin sheath for the penis, which hangs in front of the new scrotum in its new permanent position; this step the authors style *penile neo-vagination*. On each side of the new root of the penis, the surgeon cuts a quadrilateral flap slightly oblique outward and downward, and the hinge of which corresponds almost exactly in position with the lateral and vertical borders of the new scrotum. It is essential, however, that these flaps should have an abundant blood-supply, and, therefore, the limiting incisions must not come too near the upper, prepubic, incision. The length and width of those flaps must, in each individual case, be fitted to the size of the penis, care being taken always to have abundant, rather redundant, material; insufficient flaps may lead to partial failure or compel later to resort to complementary skin grafting. These flaps are drawn and folded around the corresponding half of the penis and sutured together.

When the operation is completed, there are five lines of suture, viz.: A longitudinal suture on the dorsum of the penis; one similar on the ventral aspect of the penis; a short transversal suture just above the root of the penis; a circular suture around the urinary meatus; and finally, above all, the horizontal scroto-pubic suture above referred to. If the glands were not deeply involved and if it was possible to spare a small healthy part of the foreskin, a new prepuce and coronary sulcus can be made.

As rather large dead spaces are left in the connective tissue, hemostasis must be very thorough, and it is best to drain in the most dependent point, through a special scrotal stab wound, if need be.

A retained catheter may prove a necessity in some cases; in the author's case, however, the patient easily voided spontaneously. Again, the operation started a copious lymphatic "bleeding," which did away with the considerable infiltration of the connective tissue; the latter, before the operation, was more than an inch thick.

J. DUMONT.

GENITAL ORGANS

Sochtschin: Torsion of the Testicle (Volvulus Testis). *Chirurgia*, 1913, xxxiii, 52.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This is a rare affection and the literature on the subject is scanty. Bogdaniky has collected the greatest number of cases — fifty cases of volvulus testis, with three personal observations. Grunert's statistics comprise 23 cases with one personal case.

The author's case was that of a fourteen-year-old patient who was admitted to the hospital in a most serious condition. He complained of vomiting and severe pains in the scrotal region, which began suddenly during defecation the day before. The left half of the scrotum was greatly swollen, the skin red and very sensitive to pressure. The temperature was 37.7° .

The testicle and epididymis were covered with blackish green spots, and the veins of the plexus were thrombosed. The testicle could be easily luxated, and it was seen that the vas had been twisted fully 360° from left to right.

The anatomical conditions for the development of a volvulus of the testicle are to be found in an abnormal development. The pathological and anatomical investigations of Keith, et al, have shown that in a testicle in which a volvulus had occurred the peritoneal fold attaching to the normal testicle was either absent or abnormally long.

Nicolodini regards trauma and forced movements of the body as etiological factors. Klinger and Winiwarer believe that the increased pressure of the abdominal wall plays a rôle, or was probably the cause in the case described by the author. Therapy naturally is purely operative.

SCHAACK.

Belfield: Vasostomy-Radiography of the Seminal Ducts. *Surg., Gynec. & Obst.*, 1913, xvi, 568.

By Surg., Gynec. & Obst.

Several years ago the author devised and described irrigation of vas and vesicle through a vasostomy whereby the entire genital duct, from epididymis to urethra, can be medicated with any suitable solution. Experience with this procedure has shown (1) that many cases of gleet, incurable through treatment of the urethra (because the dis-

charge proceeds from the vesicles) can be thus cured; (2) that vas and vesicle may discharge their contents into the prostatic urethra not merely by ejaculation but also by unperceived peristaltic contraction — a function which explains some cases of mysterious pyuria, hæmaturia, phosphaturia, and transient albuminuria without disease of kidneys, bladder or urethra; that, in fact, the bladder may be a reservoir for the seminal as well as urinary ducts; (3) that toxæmia may proceed from chronic infection of the seminal vesicle by the colon bacillus as well as by the gonococcus; that obstructions to the passage of spermatozoa from testis to urethra, causing sterility, are frequent in the vas and ejaculatory duct.

More recently he has utilized vasostomy as a means of radiographing the vas and vesicle, which are thus filled with a collargol solution. These radiograms reveal, among other items: (1) the occasional transformation of the infected vesicle into a pus sac, or pyovesiculosis; (2) the possible obstruction of the ureter, with consequent kidney symptoms, by an infected vesicle — a condition discovered through operation by Morgan and Young.

EDWARD L. CORNELL.

Gleason: Hypertrophy of the Prostate. *N. Y. M. J.*, 1913, xcvi, 1019. By Surg., Gynec. & Obst.

Tandler and Zuckerkandl have substantially advanced the knowledge of the anatomy and surgical pathology of the prostate by the following points:

1. — That the anatomical capsule of the prostate is derived from, and is intimately connected with, the endings of the pelvic fascia that meet around the gland.

2. That it is impossible to enucleate the prostate out of the capsule; it can only be dissected out.

3. That the prostatic capsule of the surgeon consists of compressed prostatic tissue.

4. That hypertrophy takes place only in the central lobe.

5. That enucleation of the hypertrophied prostate occurs inside of a circular layer of compressed prostatic tissue, detached from the central part of the gland.

6. That this part of the gland is interwoven with the proximal end of the urethra.

7. That malignancy of the prostate is observed from earliest childhood until old age.

The etiology of hypertrophied prostate is unknown. The author quotes Wilson and McGrath, who have done extensive work along this line. These men state, "No hypothesis has yet been advanced which will adequately explain the cause." Freyer, after studying one thousand cases of complete enucleation states, "I have to confess that I have still no insight into the origin of this disease."

Conditions requiring prostatectomy are:

1. When there are three to fifteen ounces of residual urine.

2. Extreme over-distension and dribbling.

3. Retention from time to time.

4. Ability to void some urine without use of catheter.

5. Entire dependence on catheter.

6. Complete retention and beginning infection.

Symptoms of prostatism: Primary symptoms are: (1) Frequency of micturition, becoming more difficult and prolonged. (2) The stream starts slowly and sometimes dribbles — followed by a sense of fullness, burning pain and distress. (3) These symptoms gradually become more and more pronounced and partial or absolute retention may or may not intervene.

Secondary symptoms are insomnia, loss of appetite, strength, and weight.

The proper anti-operative treatment is very essential, in regard to the proper action of the skin, kidneys and bowels. In septic cases perineal or suprapubic drainage should be established as a preliminary measure in treatment.

In the choice of an operation and the technique used, one should deliberately weigh the evidence presented, and, keeping in mind the element of safety, choose the operation that will promise the most favorable result in the individual case. With the present knowledge of the anatomy and pathology of the prostate, the suprapubic method should be the operation of choice unless there are strong contra-indications.

The author holds that the advantages to be gained are:

1. It provides absolute control from the time the urine is first voided through the urethra.

2. It enables one thoroughly to explore the bladder.

3. It is less likely to be attended with painful complications (such as inflammation in epididymis or testicle, or wound of the rectum). The disadvantage is that the suprapubic wound usually requires a longer time to heal. Freyer's method of complete enucleation is the one of choice.

The perineal operation should be reserved for cases presenting: (1) Hard fibrous prostate. (2) When the gland is situated well down toward the perineum. (3) If condition is complicated by presence of stone. (4) In fibrous or malignant cases when the gland must be dissected out. The method of Young is the one of choice.

The author concludes by saying, "Prostatectomy is not an operation to be attempted by an inexperienced surgeon."

H. A. MOORE.

MISCELLANEOUS

Legueu, Papin, and Maingot: Radiographic Examination of the Urinary Tract (Exploration radiographique de l'appareil urinaire). Paris: Gittler, 1913. By Journal de Chirurgie.

Radiography can give invaluable information regarding the anatomy of the urinary apparatus. When a sufficiently delicate technique is used, the shadow of the kidney is seen in three-fourths of the cases and not only the position and relations but

also the shape and size of the organ can be determined.

The renal blood vessels can be well studied by radiography after their injection with opaque material. The authors have thus demonstrated the presence of end-arteries and the venous connections in the kidney.

By injecting into the urinary tract 10 per cent collargol it is possible to obtain good pictures of the hilum, calices, ureters and of the changes in shape of the bladder.

By simple radiography or with the aid of opaque catheters or collargol, the anomalies of shadow and disorders of the kidneys and ureters can be accounted for. There is no other method of demonstrating these things as accurately as does the radiograph. The same is the case in renal retention, to which one of the chapters in this most excellent and original work is devoted.

Search for calculi in the urinary apparatus is still the commonest cause for urinary radiology, as it is best known to the physicians at large. Now with good technique only 2 or 3 per cent of stones in the kidney or ureter are missed unless the stones are very small or the patient very stout, unless the patient moves, or the stone is made of uric acid. The existence of diverse shadows often makes the absolute diagnosis of uretral calculi very difficult to those who have not had considerable experience. The problem is generally less difficult to solve for stones and foreign bodies in the bladder.

The study of movable or tuberculous kidneys or of renal tumors is often facilitated by the X-ray, as the numerous negatives show.

Finally, the possibility in certain cases of studying the condition of the prostate and the caliber of the urethra completes the review of the uses of radiography in this connection. R. LEDOUX-LEBARD.

Marion: Significance of Hiccough Following Operation on the Urinary Tract (De la signification du hoquet post-opérative chez les urinaires). *J. d'Urol.*, 1913, iii, 580. By *Journal de Chirurgie*.

Hiccough similar to that observed in peritonitis, or in certain hysterical patients, occurs not infrequently after operation on the urinary tract. It lasts for hours, may intermit for a variable time, recurs without apparent cause and so goes on, not infrequently ending in death after several days, during which time the patient has become progressively enfeebled and torpid.

Marion believes that this symptom is in the greater majority of cases a uræmic manifestation, an evidence of "azotemia." Four patients who presented this symptom showed a coincident marked increase in the quantity of urea in the blood (.8 gr. before operation, 1.2 during the hiccough: .83 before, 4.28 after, etc.). These cases, supposedly, under the influence of chloroform, or of a post-operative infection, have suffered a "touch of nephritis." The treatment of choice is, therefore, the use of a non-nitrogenous diet and of sedatives, of which latter ether and valeronal appear to be especially useful. J. TANTON.

Bachmann: Venereal Prophylaxis; Why It Sometimes Fails. *J. Am. M. Ass.*, 1913, lx, 1610. By Surg., Gynec. & Obst.

The author reviews the work of Russell and Nichols of the U. S. Army to demonstrate the value of calomel ointment and other antiseptics as a prophylactic against gonorrhœa. Their experiments were made in cases of acute gonorrhœa. The ointment was injected into the urethra and retained fifteen minutes then washed out by urination after which the urethral secretion expressed from the meatus was cultured upon ascites agar and examined with Gram's stain. Two series of eight cases each were studied. In the first 25 per cent calomel with phenol and camphor in lanolin and lard was used. It proved effective in seven of the eight cases. In the second series 30 per cent calomel in lanolin and 3 per cent phenol in lanolin were used with failure in all cases.

Bachmann in nine exposures in different men to an infected woman used the navy ointment (33⅓ per cent calomel, 1 per cent tricresol in benzoinated lard) and obtained negative results in all. Two control cases, who did not use the ointment, were infected. With this ointment the author then repeated Russell and Nichols' work in two series of sixteen cases each, making cultures from platinum loop scrapings in the first and from expressed secretion from the meatus in the second. Of the first series seven were positive, and nine negative, and of the second, nine were positive and seven negative. Tubes of ointment bought in the open market proved failures in all of a third series of six cases.

The author calls attention to variations in the ingredients and their proportions making up the ointments and also the difference in technique of their application as causes for failures. H. G. HAMER.

SURGERY OF THE EYE AND EAR

EYE

Brown: The Relation of Accessory Cavity Diseases to the Eye and the Orbit. *Ohio St. M. J.*, 1913, ix, 207. By Surg., Gynec. & Obst.

The close anatomical relationship of the eye and its appendages to the nose must be granted. The relationship of the blood supply is also close. In sinusitis the following symptoms are often noted: headache, variously located but more or less constant; infra-orbital, supra-orbital neuralgia; asthenopia, smarting and burning of eyes and eyelids, or acute ocular fatigue on close work. Hyperæmia of the conjunctiva, orbital cellulitis, abscess, exophthalmos, œdema of lids, optic neuritis and panophthalmitis are frequently associated with sinus disease. Sixty per cent of the cases of orbital inflammation are of known nasal origin. Then follows a report of seven cases with orbital or ocular disease, improvement or cure following treatment of the causative disease in every case. The article is illustrated by eight photographs of anatomical specimens demonstrating the relations very clearly.

In the discussion, STUCKY brought out the influence of internal toxæmias on the nasal structures, explaining that an intestinal auto-intoxication may cause an occluding œdema and that under these conditions the retained secretion becomes purulent. WOODS brought out the importance of more careful nasal examination in eye conditions as spoken of above. FISH emphasized the importance of the X-ray in sinus diagnosis. MURPHY (Cincinnati) spoke of the frequent complication of sinus disease in acute infectious disease. EARLE B. FOWLER.

Lang: The Influence of Chronic Sepsis upon Eye Disease. *Lancet*, Lond., 1913, clxxxiv, 1368. By Surg., Gynec. & Obst.

Lang has been credited as first to recognize the connection between pyorrhœa and the inflammation of the iris and in this article sums up and illustrates his observations. The nature of the poison he has not determined.

Of his series, two hundred and fifteen were attributed to chronic sepsis, one hundred and sixty-eight to all other recognized causes. Of two hundred and fifteen toxic cases one hundred and thirty-nine were due to pyrrhœa, others to sinus inflammation, alimentary toxæmia and urethritis.

Though chronic sepsis may cause inflammation in any portion of the eye the uveal tract is shown to be most frequently involved. The ten cases cited illustrate the rapid recovery that follows removal of the causative factor. EARLE B. FOWLER.

Dwyer: The Use of Vaccines in Eye Infections. *Arch. Ophth.*, 1913, xlii, 227.

By Surg., Gynec. & Obst.

From his observations of 300 cases Dwyer states that vaccines, properly administered, are agents which have no equal in certain cases of eye infection.

Of twenty-seven cases of hordeola, in all of which some strain of staphylococcus was isolated and an autogenous vaccine given, twenty-four have been entirely free from the attacks since the treatment. The dosage was 100 million increasing to 1,000 million, given five days apart and seven or eight doses in all, two after the condition had cleared up. A general improvement in health was noted in most of the cases after the first injection. Further, twelve infections with the tubercle bacillus are reported diagnosed clinically and by the tuberculin reactions. Of these five phlyctenular conjunctivitis and keratitis cleared and have not recurred. One case of iritis, three of keratitis, one of choroiditis and two of episcleritis all responded rapidly to tuberculin injections.

The gonococcus vaccine was used in two cases of iritis with rapid clearing, and in four cases of conjunctivitis the author believes the course was much shortened by the very large doses given. A pneumococcic ulcer of the cornea responded very satisfactorily in three cases. In staphylococcic dacryocystitis (3) and conjunctivitis (3) the results were gratifying. Two cases of Morax-Axenfeld gave surprising results under autovaccine treatment. A two-page digest of immunity and serum-therapy follows. The author favors autovaccine as compared with stock products where practical.

EARLE B. FOWLER.

Vail: A Study of Some Forms of Congenital Cataract, with Special Reference to Their Clinical Significance. *Lancet-Clin.*, 1913, cix, 528. By Surg., Gynec. & Obst.

Vail describes the embryonic development of the lens and discusses the different forms of congenital cataract, following the teachings of Collins and Mayou. In the disk-shaped or "anuclear" cataract he believes it is a mistake to do the needling operation. Col. Smith would extract such a cataract with iris forceps through a small corneal incision, after having made a good-sized iridectomy.

In educated classes an iridectomy may be performed early and another operation done for the cataract when the lens becomes fully cataractous. In cases of cataract with considerable opacification of the lens, it is generally a mistake to consider needling, as the opacities are insoluble and are irritating when liberated. C. G. DARLING.

Simpson: The Intra-Capsular Operation for Cataract after the Method of Professor Stancleanu. *Ophthalm. Rec.*, 1913, xxii, 241.
By Surg., Gynec. & Obst.

Simpson describes the intra-capsular operation for cataract as done by Stancleanu. The upper lid is held with a double hood retractor, well away from the eye. The operation is done in a dark room by electric light. The incision in the cornea is a trifle larger than the ordinary. An iridectomy is made. The anterior capsule of the lense is then grasped with a special forceps without teeth. The closed forceps is passed sideways into the anterior chamber; when in the pupillary area it is turned perpendicular to the surface of the lens and by a slight pressure backwards, made to bite the capsule.

The zonular fibers are ruptured by side-to-side and up-and-down movements. When the lens is loose, the forceps is opened and removed. If the capsule is torn loose, the operation goes on in the usual way. After the lens is loose continuous pressure is made with a spoon over the cornea, slightly below the center, with slight counter-pressure above the cornea. As the lens in its capsule comes through the incision, it is followed with the spoon from below.

C. G. DARLING.

Campbell: Five Cases of Hereditary Cataract. *J. Ophthalm., Otol. & Laryngol.*, 1913, xix, 144.
By Surg., Gynec. & Obst.

Campbell reports operating five cases of hereditary cataract occurring in three persons with a family history of seven or more in the same family, all developing cataract between the ages of twenty-five and twenty-nine, in eyes previously normal.

In the first case seen by Campbell, cataract developed at twenty-eight in one eye and at thirty-three in the other. Case 2, the brother of Case 1, developed cataract at the age of twenty-six in both eyes. Case 3, the sister of Cases 1 and 2, had at the age of twenty-five, an operation for cataract on one eye. Campbell operated the other eye one and a half years later. The father of these patients had been operated for cataract when thirty years of age. The father's sister and a cousin also had cataract at an early age.

C. G. DARLING.

Jennings: The Removal of Senile Cataract Before Maturity. *Med. Herald*, 1913, xxxii, 97.
By Surg., Gynec. & Obst.

Jennings advises the removal of cataract when immature, if vision of both eyes is low.

He makes a corneal incision without conjunctival flap, uses capsule forceps for opening the capsule and washes out the cortical matter with salt solution, using a glass tip syringe introduced well down into the lenticular space.

C. G. DARLING.

Meding: Another View of the Extraction in the Capsule Cataract Operation. *Arch. Ophthalm.*, 1913, xlii, 241.
By Surg., Gynec. & Obst.

Meding gives the reasons for the study of the Indian cataract operation under Col. Smith as these:

The crying need for relief from immature cataract; dissatisfaction with the cataract operation he was using because of the capsule remnant left behind, and unsatisfactory cosmetic results.

With a tribute to Col. Smith, Meding tells of the operation and his experience with it. The main and apparently forbidding difficulty of the operation is the factor of pressure. The pressure necessary to express the lens in its capsule demands "thinking fingers." As taught at Auritsar, the pressure is positive, controlled and safe; under good tuition it can be learned. A competent assistant is necessary. Results are startling. The author found what he sought: one operation, a clear pupil, a vision to enable men to earn their living at their usual vocation; easiest in the immature, most difficult in the hypermature.

The field is prepared by douching with 1-2000 bichloride and without rubbing, squeezing or evert-ing.

EARLE B. FOWLER.

Stähli: Contribution to the Pathology of Hæmorrhagic Glaucoma. *Arch. Ophthalm.*, 1913, xlii, 248.
By Surg., Gynec. & Obst.

Stähli gives a detailed microscopic description of three additional cases of hæmorrhagic glaucoma and furnishes further data to corroborate the findings of others, namely, that marked and typical changes are present in the central vessels. Although serial cross-sections of the optic nerve were made, the pathological changes are ingeniously elucidated by two composite figures which picture axial sections of the central artery. The greatest changes were found in the intima, but not located in the region of the lamina cribrosa, where, as a rule, they have been described. In all three cases more or less sclerosis was found in the central arteries and veins. The greatest change consisted of a true hydrops of the intima cells, which constituted the principal cause for the endarteritic thickening, and stress is laid on this œdematous condition because acute and transitory occlusion of the vessels may result from it. The fact that the endothelium was everywhere intact furnishes proof that thrombosis had not occurred. Vascular changes were also found in the choroid, ciliary body, and iris. These changes have led to the recognition of hæmorrhagic glaucoma as a separate disease from glaucoma.

FRANCIS LANE.

Hallett: Glaucomatous Tension Relieved by Anterior Sclerotomy. *J. Ophthalm., Otol. & Laryngol.*, 1913, xix, 178.
By Surg., Gynec. & Obst.

Hallett, with the idea of making an iridectomy more favorable, did an anterior sclerotomy with a split keratome as a preliminary effort to reduce high tension in a case of typical acute glaucoma. Postponing the iridectomy for one week, it was found that normal tension had been restored and that the vision had improved from fingers at six feet to 10/200. After four more weeks 20/100 was recorded and the patient was enabled to resume his former occupation.

The author kept the case under observation for a period of twenty-one months, and, although the field was much contracted and deep glaucomatous cupping was present, the vision remained the same and the glaucoma was apparently arrested.

FRANCIS LANE.

Hird: A Case of Enlargement of the Eye-Ball.

Ophth. Rev., 1913, xxxii, 137.

By Surg., Gynec. & Obst.

The patient was a boy aged eleven, who had the condition since infancy. Examination revealed the following: left face and ear appeared to be a little larger than the right, but on taking careful measurements in all directions only a slight enlargement of the left ear could be made out with certainty. The left palpebral fissure was a little larger than the right and this in spite of the fact that, if anything, there was slight enophthalmus. When the globes themselves were compared the difference was very evident; the left eye-ball appeared much larger than the right. The corneal diameters were: left vertical 13 mm. and the horizontal 14 mm. The pupil reactions were normal, but the left was larger (4 mm. diam.) than the right (3 mm. diam.), fixing a distant object in ordinary daylight. There was no tremulousness of the iris in the left eye and when the pupil was dilated the edge of the lens could not be seen and therefore did not appear to be small in comparison with the rest of the eye. The left anterior chamber was distinctly deeper than the right. Intra-ocular tension was quite normal in both eyes. There was no evidence of stretching or thinning of the sclerotic coat in the left eye. The fundi were quite normal, with not the slightest sign of any pathological cupping. The physiological cup was normally present in the left eye.

The child was myopic, and, as there was some ciliary spasm, he was put under atropin for a few weeks. It had no effect on the tension in the left eye, which remained at normal with a widely dilated pupil. After nine months the conditions were unchanged. Fuchs states in his textbook that infantile glaucoma may come to a standstill, and, of course, this case may be an abortive one. The author thinks it is a simple hypertrophy of the globe.

EARLE B. FOWLER.

Pooley and Wilkinson: Blindness of Left Eye Due to Pressure of Distended Maxillary Antrum.

Ophth. Rev., 1913, xxxii, 130.

By Surg., Gynec. & Obst.

The case reported is that of a woman 30 years of age who gave a history of left blindness coming on in twenty-four hours with no other symptoms except periodic headaches. In examining the eye there was no perception of light, pupil inactive except to light thrown in opposite eye, media clear and fundus normal. Puncture of left antrum was followed by an escape of straw-colored fluid. Operation through the canine fossa with removal of a polypoid growth and an opening for permanent drainage into the

nose was done at once. Vision improved rapidly up to normal about the twelfth day.

The case is summed up as one of pressure on the optic nerve by displacement, upward, of the antrum from pressure of the cyst within. This is a rare condition and no report of a similar case was found by the authors.

EARLE B. FOWLER.

McReynolds: Some Impressions of the Oxford Ophthalmological Congress and the Ophthalmological Section of the British Medical Association at Birmingham.

Tex. St. J. Med., 1913, viii, 332.

By Surg., Gynec. & Obst.

Three fourths of the combined sessions was devoted to the consideration of subjects introduced by men connected with the provincial governments.

McReynolds says, in considering British ophthalmology, that a broader view of the field must be taken since Col. Smith has performed more than 25,000 cataract extractions and Major Elliott has done about 400 trephining operations for glaucoma.

British ophthalmologists generally are not yet ready to adopt the Smith operation, the consensus of opinion being distinctly in favor of the combined extraction whether intracapsular or not. There was strong endorsement of MacEwen's methods of irrigating the anterior chamber, and vigorous opposition to the early performance of a secondary operation on the capsule.

In regard to glaucoma, the general opinion prevailed that correct iridectomy was reasonably effective in acute glaucoma and that experience indicated that the methods of Elliott and Herbert presented marked advantage for the chronic types.

C. G. DARLING.

EAR

Wells: A Case of Mastoid Abscess without Otorrhœa.

Va. M. Semi-Month., 1913, xviv, 56.

By Surg., Gynec. & Obst.

The author reports an interesting case operated on for mastoiditis in which otorrhœa was absent. The patient presented a diffuse œdema over the mastoid and some tenderness on deep pressure. Otoscopic examination showed a thick, red, but perfectly intact, drum membrane. His condition was normal otherwise, except for the loss of weight.

After the mastoid was opened, the hard bone was found softened and necrotic, with pus formation in places. It extended to the mastoid apophysis, upwards including the zygomatic cells, backward to the ridge of the lateral sinus, and forward nearly to the posterior wall of the meatus. The wound healed rapidly and completely and the patient showed improvement in general.

WALTER H. THEOBOLD.

Voorhees: Serous and Suppurative Labyrinthitis; Differential Diagnosis.

Boston M. & S. J., 1913, clxviii, 716.

By Surg., Gynec. & Obst.

Operation procedure in serous labyrinthitis results in loss of hearing, whereas failure to operate

in a case of suppurative labyrinthitis endangers the life of the patient, hence the importance of this differentiation. Two forms of the serous type have to be considered: the first, an accompaniment or result of some destructive process on the inner tympanic wall, known as diffuse serous secondary labyrinthitis; the second, a sudden non-suppurative inflammation due to disturbance of the vascular system of the middle and internal ear, often occurring three or four days after a radical operation. This is the diffuse serous induced type. The second can only be determined by careful and exhaustive functional tests. So long as there is a remnant of labyrinthic function, diffuse suppurative disease is not present. The suppurative type is divided into the diffuse latent and manifest forms.

The author comes to the following conclusions: In general, if the slightest remnant of function is still present the labyrinth should not be disturbed, i.e., there should be no shaking up, no probing, no meddling of any kind, and absolute rest in bed should be enjoined. If the labyrinth is completely out of commission, the history of the case must be carefully weighed and as accurate a diagnosis as possible arrived at. One may wait a week or ten days, and if there is the slightest peioration of the symptoms a labyrinthine operation should then be performed.

DIFFERENTIAL TABLE MODIFIED FROM RUTTIN

Type of Diseases	Anamnesis (History)	Present Symptoms	Nystagmus	Hearing Caloric Reaction	Turning Reaction	Fistula Test
Diffuse serous secondary labyrinthitis.	Dizziness some time ago	+	To sound side — +	+	+	+
Diffuse suppurative manifest labyrinthitis.	Dizziness present or absent	+	To sound side —	—	—	—
Diffuse suppurative latent labyrinthitis	Dizziness some time ago	—	Absent or to both sides	—	— + if compensated	—

EARLE B. FOWLER.

Hautant: Indications for and Technique of Trepanation of the Labyrinth (Indications et technique de la trépanation labyrinthique). *Rev. hebdom. de laryngol., d'otol. et de rhinol.*, 1913, xxxiv, 609. By Journal de Chirurgie.

Hautant deals only with trepanation of the labyrinth in suppurative labyrinthitis. In partial labyrinthitis (simple fistula, circumscribed labyrinthitis, and partial diffuse labyrinthitis) it is useless to trephine. Moreover, the operation is contra-indicated if any of the sense of hearing remains.

In complete acute labyrinthitis Alexander advises waiting for spontaneous recovery and operating only in case meningeal symptoms appeared. Ruttin,

on the other hand, counsels immediate intervention. The author divides complete acute labyrinthitis into two forms: one benign and the other dangerous.

Under the benign form he classes: (1) Post-operative labyrinthitis resulting from trauma to the horizontal semicircular canal; (2) acute labyrinthitis arising during the course of simple acute otitis; (3) labyrinthitis complicating acute mastoiditis; (4) tuberculous and scarlatinal labyrinthitis.

Under the dangerous form he classes: (1) Post-operative labyrinthitis following injury to the fenestrum ovale; (2) complete acute labyrinthitis developing during an exacerbation of a chronic suppurative otitis media and accompanied by signs of marked vestibular reaction lasting more than fifteen days.

In general, chronic labyrinthitis does not require operation. Trepanation of the labyrinth in these cases is done only when there are persistent symptoms of vestibular irritation (vertigo, spontaneous nystagmus and disturbance of equilibrium) or when a facial palsy or the presence of a sequestrum or of a zone of osteitis is diagnosed.

The appearance of meningeal or cerebellar symptoms is indicative of complicated labyrinthitis. If this occurs during the course of an acute otitis or mastoiditis one may limit operative procedure to paracentesis of the tympanum or to trepanation of the mastoid, since in these cases we have usually to deal with a simple diffuse meningeal irritation; but on the other hand, when complicated labyrinthitis appears during the course of a chronic otorrhœa the labyrinth must be trephined. The operation advised by the author has two aims: (1) To open and drain the vestibule which is the center of the infection by an anterior opening which prevents the propagation of the infection to the internal auditory canal (ante-facial trepanation). (2) To guarantee the isolation of the vestibule from the posterior cerebellar fossa by a posterior contra-opening made in the depths of an intersinuso-facial incision.

The anterior opening of the vestibule consists in uniting the fenestrum rotundum and the fenestrum ovale. Thus the lower and anterior portion of the vestibule, and the origin of the first spiral of the cochlea are laid bare. The retro-facial contra-opening is situated on a horizontal line which passes through the posterior pole of the fenestrum ovale and extends 5 millimeters posterior to this pole. This gives access to the horizontal canal and by following the posterior branch of this canal, one arrives directly at the vestibule.

Trepanation of the labyrinth has an operative mortality of 4½ per cent. The author claims that the results obtained have proved that it constitutes a real progress in the treatment of suppuration in this region.

GEORGES LAURENS.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Lawner: Tumors in the Neighborhood of the Ostium Pharyngeum Tubæ (Geschwülste in der Gegend des ostium pharyngeum Tubæ). *Monatschr. f. Ohrenheilk. u. Laryngo-Rhinol.*, 1913, xl, 262.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A young physician, who since childhood frequently suffered from angina and nasal catarrh, complained for two years of symptoms pointing to closure of the Eustachian tube. By means of posterior rhinoscopy and salpingoscopy a yellowish white tumor, the size of a pea, was seen on the upper surface of the right tubal opening, in part covering the tube and in part compromising it. A second small tumor was situated in the pharyngeal tonsil. The first tumor was removed through the nose by means of a snare and the second was removed with the entire tonsil containing it. Both tumors were cysts lined by flat epithelium. They were probably due to epithelial inclusion and cystic degeneration, following chronic inflammatory processes. The literature of benign and malignant tumors occurring in this region is given.

KLEINSCHMIDT.

Ray: The Tonsil Question Again. *Louisville Month. J.*, 1913, xix, 353.

By Surg., Gynec. & Obst.

The purpose of the paper is to insist that the operator use judgment in selecting his cases, and surgical skill in carrying out the procedure. The author first takes up the essentials of the embryology, anatomy and physiology of the tonsil with its life history and the evidence in support of the belief in an internal secretion. He does not believe that the tonsils play any great part as portals of entry for infection in either rheumatism or tuberculosis.

His indications for removal are as follows: simple hypertrophy causing obstruction, cases of frequent recurring attacks of follicular tonsillitis, in relapsing attacks of peritonsillar abscess, and in growths originating in the tonsil, also in some toxic conditions where the crypts are large and contain decomposing masses. He does not consider that the removal is indicated in middle ear disease nor as a cure for the enlargement of the cervical glands.

In the discussion there was little else brought out as all of the men felt much as the author did in regard to the indications. The majority were in favor of tonsillectomy in every case though a small portion of the lower pole might be left to functionate.

EARLE B. FOWLER.

Carter: A Simple and Satisfactory Method for Removing Adenoids and Tonsils. *Med. Rec.*, 1913, lxxxiii, 986.

By Surg., Gynec. & Obst.

In removal of the tonsil with the capsule the author uses a spiral tenaculum which consists of two

spiral prongs, each compassing half a circle, attached to a long, slender shaft. These prongs are made only a half circle in length in order that it may be quickly and easily engaged and disengaged. With this the tonsil is pulled toward the median line. The tonsil separator consists of a short beveled blade, curved on the flat, sharp on both sides and the end, and is used to cut through the plica and the mucous membrane along the margin of the pillars. The tonsil is pried out from its bed, using the separator as a lever. The removal is completed with an Eve's snare.

Adenoids are removed by one sweep of a Gottstein curette and the naso-pharynx wiped out by gauze wrapped around the finger.

EARLE B. FOWLER.

Hope: Laryngeal Tumor Treated with Seleniol. *Proc. Roy. Soc. Med.*, 1913, vi, Laryngol. Sect., 76.

By Surg., Gynec. & Obst.

The case reported was a male, 53 years old, suffering for several months with increasing dyspnea. Examination revealed the right arytenoid and ventricular band replaced by a large, red, smooth swelling, non-mobile. Neither cord could be seen and there was practically no glottis. Diagnosis was made of swelling above a malignant ulceration. There was definite thickening on the right side of the neck over the right ala of the thyroid and a small hard gland could be palpated.

Operative treatment was not advised because of the patient's general condition. Seleniol (3cc.) was injected three times a week into the deep tissues near the right ala of the thyroid cartilage. Great relief was experienced after the second injection.

One month later, by the direct method, a large fungating mass was seen involving the right side of the epiglottis on its laryngeal surface, extending down through the glottis. Two weeks later the mass had largely disappeared.

Seleniol is an electrolytic colloid of the metal selenium, and may be injected subcutaneously, intravenously or directly into the tumor. There is absolutely no toxic effect and the growth is said to either absorb or liquefy.

EARLE B. FOWLER.

Levy: Laryngeal Tuberculosis. *J. Am. M. Ass.*, 1913, lx, 1518.

By Surg., Gynec. & Obst.

The author emphasizes very strongly the importance of early laryngeal examination in all cases of tuberculosis, referring to the strong way this has been brought forward in Germany. Among the earliest signs we find slight, intermittent hoarseness. It is followed in many cases by a unilateral lesion with or without slight redness and moderate swelling, usually occurring on the same side as the affected

lung. The onset of tubercle deposit in the sub-mucous tissue is frequently marked by early pain and shows by a physical examination as a circumscribed pale oedematous swelling with small grayish or yellowish, pin-point elevations distinctly beneath the mucosa and imbedded in it. Rubbing the surface with a firm swab and examining it bacteriologically will often result in demonstrating the organism.

The prognosis is fair and improving. Brull gives the percentage of cures as 58.

In line of treatment the author advocates:

1. Rest of the vocal organ associated with general hygienic measures.
2. Galvanic-cautery.
3. Relief of pain by injection or section of the superior laryngeal nerve.
4. The use of tuberculin. EARLE B. FOWLER.

Richardson: The Treatment of Laryngeal Stenosis Following Diphtheria. *Boston M. & S. J.*, 1913, clxviii, 749. By Surg., Gynec. & Obst.

Stenosis of the larynx following an attack of laryngeal diphtheria occurs in only 1 to 3 per cent of the cases. It is generally the result of poor intubation technique (especially the use of an undue amount of force), prolonged intubation, a very severe infection or secondary infection. One or more of these factors result in pathological changes consisting of thickening of the mucosa, paresis of the muscles of the cords, granulations or ulcerations with formation of cicatricial bands, or a persistent membrane.

As the prophylaxis against these conditions the author advocates the use of carefully selected intubation tubes, skillfully applied and not allowed to remain in place over one month. His active treatment consists of a low tracheotomy, which puts the parts at rest, followed by dilatation with straight urethral dilators or tubes increasing the size to a maximum. These are permitted to remain only a few minutes at each sitting and are not worn.

Richardson reports nine cases to support his belief in the value of this method.

EARLE B. FOWLER.

Higgins: Apparently Non-Suppurative Nasal Sinus Disease. *Wis. M. J.*, 1913, xi, 369. By Surg., Gynec. & Obst.

The author has written an original article describing a frequently undiagnosed non-suppurative

nasal disease of the accessory sinuses, unassociated with pus and characterized by a watery mucus discharge, sneezing, especially in the morning, asthma, due to reflex irritation, cough, dry or in paroxysms, pain, varying in location with the sinus involved, deafness, due to nasal congestion, asthenopia and disturbance of the visual field. The physical signs upon which a diagnosis is based need not be pronounced.

He thinks that rhinologists have erred in the belief that all sinus disease must reveal itself by the appearance of pus either by drainage or demonstrated by negative pressure as applied through the agency of Brawley's suction apparatus. Higgins states that if the ultimate diagnosis is based upon the findings of pus, many cases will go undiagnosed and untreated where treatment is urgently indicated; for there is a nasal sinus disease without pus discharge, and yet with sufficient pathology to produce polyps, granulation tissue and necrosed bone, as well as vascular and lymphatic stasis.

The author advocates operation in certain cases of negative findings including the newly described non-suppurative disease, as well as some suppurative cases in which the usual diagnostic methods do not positively indicate pus. ELLEN J. PATTERSON.

Iglauer: Suspension Laryngoscopy; with Report of Cases. *Lancet-Clin.*, 1913, cix, 702. By Surg., Gynec. & Obst.

The article tells of the manner in which this method was discovered by Killian; an exact description of the instrument and the technique of its use; a report of six diagnostic and operative cases demonstrating its advantages.

In this method a hook spatula, which includes the tongue blade, is suspended from a gallows, thereby doing away with the necessity of holding it and permitting of direct examination of the larynx, the patient lying in the dorsal position. The patient takes a passive part in the procedure; suffers but little discomfort; can tolerate prolonged operations within the larynx, and is not annoyed by saliva or blood flowing into trachea. The operator works in an easy position, with both hands free, and has a wide field of vision with the larynx at close range and ample space for all necessary manipulation. The pathology and the surgery of the larynx can be better demonstrated to students by this method.

EARLE B. FOWLER.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

An improved method of conserving anatomical specimens. JORES. München. med. Wchnschr., 1913, lx, No. 18.

A surgical method of treating abscesses by puncture and modifying injections. GABRIEL. Progrès méd., Par., 1913, xli, No. 19.

Aseptic and Antiseptic Surgery

Disinfection of the hands in surgery. G. APERLO. Clin. chir., 1913, xxi, 331. [265]

Disinfection of the skin by tincture of iodine in children; its harmlessness. MONOD. Arch. de méd. d. enfants, Par., 1913, xvi, No. 5.

Disinfection of the skin with tincture of iodine. GAETANO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 257. [265]

Tincture of iodine in the treatment of fresh wounds. T. G. ORR. J. Mo. St. M. Ass., 1913, ix, 371.

Benzine and toilet. C. ROUX. Cor.-Bl. f. schweiz. Ärzte, 1913, xliii, 496.

The germicidal efficiency of commercial preparations of hydrogen peroxid. P. G. HEINEMANN. J. Am. M. Ass., 1913, lx, 1603.

Preparation of the patient for abdominal operations, and some points on the after-treatment. R. P. ROWLANDS. Guy's Hosp. Gaz., 1913, xxvii, 209.

Modern treatment of wounds and first aid. W. LIERMANN. Zentralbl. f. Gewerbehyg., 1913, i, 121. [266]

Modern steam sterilization. M. RUBNER. J. Am. M. Ass., 1913, lx, 1344.

Conservation and sterilization of half-soft instruments. DUFAUX. Ztschr. f. Urol., Leipzig, 1913, vii, No. 5.

Anæsthetics

The technique of anæsthesia. G. E. PUTNEY. J. Lancet, 1913, xxxiii, 261.

Generalized narcosis. M. VON BRUNN. Neue deutsche Chirurgie, v. Stuttgart: Enke, 1913.

General anæsthesia with lessened circulation or exclusion of the four extremities in general anæsthesia. DELAJENIÈRE. Clinica mod., 1913, xii, 41. [266]

Anæsthesia in the surgery of the superior respiratory passages. NASTA and WACHMANN. Revista de chir., 1913, i, No. 1.

Chloroform or ether? SALVETTI. Riforma med., 1913, xxix, No. 17.

A drop method of giving ether with a closed inhaler. C. P. BULL. Med. Rec., 1913, lxxxiii, 938.

Intratracheal insufflation of ether. H. D. CRAWFORD. Med. Press & Circ., 1913, cxlvi, 545.

The blood-pressure during morphine-ether anæsthesia. E. F. HORINE. Lancet-Clin., 1913, cix, 563.

Nitrous oxide gas, essence of orange, ether, and sequestration in general anæsthesia for operations in the upright position. T. R. FRENCH. N. Y. M. J., 1913, xcvi, 1061. [266]

Narcosis by means of the internal administration of hedonal. SIDORENKO. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, No. 2.

Narcosis by means of magnesium. SCHÜTZ. Wien. med. Wchnschr., 1913, xxvi, No. 19.

Local anæsthesia. PRAAG. Med. Weekblad, Amst., 1913, xx, No. 5.

The present state of local anæsthesia. SIEBERT. Klin. therap. Wchnschr., Berl., 1913, xx, No. 20.

Local anæsthesia in general surgery. L. WATSON. J. Okla. St. M. Ass., 1913, v, 529.

Local versus general anæsthesia. R. W. KNOX. Tex. St. J. Med., 1913, ix, 6.

Recent methods of local and general anæsthesia. WETTSTEIN. Med. Klin., 1913, ix, No. 17.

Local anæsthesia in minor gynecology. S. J. WOLFERMANN. J. Mo. St. M. Ass., 1913, ix, 361.

The use of quinine and urea hydrochloride as a local anæsthetic in ano-rectal surgery. L. ELIOT. Wash. M. Ann., 1913, xii, 175.

The employment of ethyl chloride narcosis in the practice of the nose, ear and throat specialist. A. FALK. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 1.

Injury of the phrenic nerve in local anæsthesia of the brachial plexus. A. E. STEIN. Zentralbl. f. Chir., 1913, xl, 597. [267]

Lesions of the nerves following plexus anæsthesia. HIRSCHLER. Zentralbl. f. Chir., 1913, xl, No. 20.

Anatomical investigations of some cutaneous nerves, important for local anæsthesia, with regard to the point at which they penetrate the fasciæ. F. ROST. Deutsche Ztschr. f. Chir., 1913, cxxi, 455. [267]

Local anæsthesia and anæsthesia of nerve tracts. MEYER. Beitr. z. klin. Chir., 1913, lxxxiii, 520. [267]

Intravenous isopral narcosis. N. BERESNEGOWSKY. Arch. f. klin. Chir., 1913, ci, 215.

Abolishing pain after operations with nerve block at a distance. L. WATSON. Ann. Surg., Phila., 1913, lviii, 730.

Concerning sacral anæsthesia. SCHLIMPERT. Surg., Gynec. & Obst., 1913, xvi, 488. [268]

Fifteen hundred lumbar anæsthesias. R. DAX. Beitr. z. klin. Chir., 1913, lxxxiii, 113.

Spinal anæsthesia in gynecology. G. GELLHORN. J. Mo. St. M. Ass., 1913, ix, 357.

Spinal anæsthesia by injection of strychnostovaine. JONNESCU. Revista de chir., 1913, i, No. 1.

Anæsthesia by means of novocaine; technique and results. LÉPOUTRE. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 20.

Oxygen-impregnated water combined with cocaine or novocaine (Marmouget's method) for the extraction of teeth. MAHÉ and VANEL. *Presse méd., Par.*, 1913, xxi, 329.

Résumé of literature concerning alypin. SEIFERT. Würzburg. *Abhandl. a. d. Ges.-Geb. d. prakt. Med.*, 1913, xxiii, Suppl., 1. [268]

Pantopon in pulmonary oedema and in agony. CHAS. WIDMER. *Schweiz. Rundschau f. Med.*, 1913, xiii, 632.

Surgical Instruments and Apparatus

New ether pad and cone. E. M. JONES. *J. Am. M. Ass.*, 1913, lx, 1618.

Compressive dressings. DUPUY and FRENELLE. *Clinique, Par.*, 1913, viii, No. 21.

Catguts: Silver nitrate catgut and iodine catgut. DEBUCHY. *J. de pharm. et de chim., Par.*, 1913, cv, 431.

A new tonsillectome. J. E. JENNINGS. *J. Am. M. Ass.*, 1913, lx, 1620.

A plaster-of-Paris splint. M. D. TOUART. *J. Am. M. Ass.*, 1913, lx, 1620.

Acetabulum gouge and bone rasp, for plastic bone work. R. O. MEISENBACH. *Am. J. Orth. Surg.*, 1913, x, 645.

The short spica in the treatment of hip-joint disease. C. R. KEPPLER. *J. M. Soc. N. J.*, 1913, ix, 599.

A traction spreader device to prevent plantar flexion of the foot. N. ALLISON. *Am. J. Orth. Surg.*, 1913, x, 140.

A universal douche attachment. LEWIN. *Ztschr. f. Urol., Leipz.*, 1913, vii, No. 5.

An abdomino-visceral support. D. G. EVANS. *Am. J. Orth. Surg.*, 1913, x, 264.

Shelf for rectal and vaginal operations. H. F. GRAHAM. *J. Am. M. Ass.*, 1913, lx, 1537.

An apparatus to be used in the application of plaster jackets, and for the photographic record of scoliosis. A. O'REILLY. *Am. J. Orth. Surg.*, 1913, x, 136.

A new scoliosometer. J. K. YOUNG. *Am. J. Orth. Surg.*, 1913, x, 459.

An instrument for the rotation treatment of scoliosis. H. E. MACDERMOT. *Am. J. Orth. Surg.*, 1913, x, 455.

New apparatus for the measurement of arterial blood pressure in man. H. VON RECKLINGHAUSEN. *München. med. Wchnschr.*, 1913, lx, 817.

Measuring instruments and measurements in röntgenology. T. CHRISTEN. *Fortsch. a. d. Geb. d. Röntgenk.*, 1913, xx, 182.

Presentation of a model of a new electrode for intra-uterine application after Haret's method. A. LAQUERRIERE. *J. de radiol.*, 1913, ix, 37.

SURGERY OF THE HEAD AND NECK

Head

Primary cancer of the scalp, with metastases. GOMOIU and VASILIU. *Revista de chir.*, 1913, i, No. 1.

An extensive growth starting as papilloma on lower lip; ligation of external carotid as palliative measure for inoperable growths. E. DUNLAP. *Tex. St. J. Med.*, 1913, ix, 9.

Successful treatment of carcinomata of the face by simple puncture infiltration of ferrum oxyduloxide. SPUDE. *Ztschr. f. Krebsforsch., Berl.*, 1913, xiii, No. 2.

Hyperplastic oedema of the face. G. NOBL. *Wien. med. Wchnschr.*, 1913, lxiii, 1170.

Facial hemispasm of traumatic origin. TUFFIER. *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 596.

The myoplastic method in the treatment of facial paralysis. GOMOIU. *Lyon chir.*, 1913, ix, No. 5.

The treatment of trigeminal neuralgia by superficial injection of osmic acid and alcohol. T. C. H. ABELMANN. *J. Mich. St. M. Soc.*, 1913, xii, 261.

A new method of treating neuralgia of the trigeminus by the injection of alcohol into the gasserian ganglion. J. GRINKER. *J. Am. M. Ass.*, 1913, lx, 1354.

The treatment of severe forms of neuralgia of the trigeminal nerve by injection of alcohol into the gasserian ganglion. A. LOEWY. *Berl. klin. Wchnschr.*, 1913, l, 784.

Anæsthesia of the mental nerve by freezing. NEUMANN-KNEUCKER. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 17. A series of cases of parotid tumor. A. STREET. *Brit. M. J.*, 1913, i, 1047.

The problem of Mikulicz's disease and its treatment. FROMOWICZ. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, Nos. 5-6.

Mikulicz's disease in its relations to leucæmia and pseudo-leucæmia. A. CECONT. *Riforma med.*, 1913, xxix, 449.

On the question of mixed tumors of the salivary glands. A. TSCHAIKA. *Arb. d. chir. Klin. d. Prof. S. Fedoroff, St. Petersburg.*, 1913, vii, 1.

Malignant neoplasms of the salivary glands. J. G. SHERRILL. *Internat. J. Surg.*, 1913, xxvi, 157.

Primary epithelioma of the submaxillary glands. TONMEUX and GINESTY. *Bull. et mem. Soc. anat. de Par.*, 1913, xv, 61. [268]

Free plastic transplantation of fat after radical operation on the frontal sinus because of empyema. J. GALPERN. *Vrach. Gaz., St. Petersburg.*, 1913, xx, 592.

Partial operation for carcinoma involving the jaws, with reports of three cases. W. T. COUGHLIN. *Interst. M. J.*, 1913, xx, 431. [269]

Fibroma of the maxilla. L. S. KETTLEWELL. *Proc. Roy. Soc. Med.*, 1913, vi, Odontol. Sect., 53. [269]

The extensive operation for malignant tumors of the upper maxillary bone. KUHN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 20.

Head injuries; clinical report. A. M. VANCE. *Am. J. Surg.*, 1913, xxvii, 191.

Basal fracture. J. N. WHITE. *Calif. Eclect. M. J.*, 1913, vi, 106.

Septa in the lateral sinus. BLUMENTHAL. *Arch. internat. de laryngol., d'otol. et de rhinol., Par.*, 1913, xxxv, No. 2.

Abscess of the retropteros bone. DE CIGNA. *Ann. d. mal. de l'oreille, du larynx, du nex et du pharynx, Par.*, 1913, xxxix, No. 4.

Subdural intracranial cyst of traumatic origin; Jacksonian epilepsy; ameliorative trepanation. JULLIARD. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 334. [269]

The treatment of epilepsy. P. HARTENBERG. *J. de méd. de Par.*, 1913, xxxiii, 343.

The surgical treatment of epilepsy. KUKULA. *Wien. klin. Rundschau*, 1913, xxvii, No. 17.

Serous meningitis. BERGMANN and KRUKOWSKI. *Med. i kron. lek., Warszawa*, 1913, xlviii, No. 20.

The value of Mallory's connective tissue stain for the demonstration of variation in thyroid colloid. A. P. JONES. *J. Exp. M.*, 1913, xvii, 547. [270]

A case of diffuse sarcomatosis of the pia mater. OTTO MARKUS. Arch. f. Psychiat., Berl., 1913, li, 322.

The technique of hæmostasis in the cerebral sinuses. W. MINTZ. Zentralbl. f. Chir., 1913, xl, 681.

A case of ruptured aneurism of a cerebral artery caused by trauma. OSCAR ORTH. München. med. Wchnschr., 1913, lx, 1038.

The origin, circulation and function of the cerebro-spinal fluid. V. KAFKA. Ztschr. f. d. ges. Neurol. u. Psychiat., 1913, xv, 482.

Experimental investigations on the direction of the flow of the cerebro-spinal fluid. H. AHRENS. Ztschr. f. d. ges. Neurol. u. Psychiat., 1913, xv, 578.

The chemistry of the brain. A. WEIL. Ztschr. f. d. ges. Neurol. u. Psychiat., 1913, vii, 1.

Graphic investigations on cerebral pulse. U. LOMBARDI. Note e riv. di psichiat., 1913, vi, 45.

Stab wound in the left temporal region of the brain. A. KARSCHULIN. Wien. med. Wchnschr., 1913, lxiii, 269. [270]

Diagnosis and surgical treatment of brain diseases. BYCHOWSKI. Med. i kron. lek., Warszawa, 1913, xlviii, No. 18.

A case of heterotopic chorio-epithelioma in the brain and the lungs. EICHORN. Ztschr. f. Krebsforsch., 1913, xiii, No. 2.

Uniquely disseminated microscopic carcinosis of the brain. PACHANTONI. Rev. méd. de la Suisse Rom., Geneve, 1913, xxxiii, No. 5.

Cystic changes of cerebral gliomata. BÉRIEL. Arch. de méd. exp. et d'anat. path., Par., 1913, xxv, No. 3.

Voluminous glioma of the frontal lobe. BÉRIEL and GARDERE. Lyon chir., 1913, ix, No. 5.

A case of "idiopathic" cerebral abscess. J. HENDERSON. Lancet, Lond., 1913, clxxxiv, 1525.

Traumatic abscess of the brain, caused by the penetration of the skull by a foreign body. DAMISTRESCU. Spitalul, 1913, xxxiii, No. 4.

Brain surgery. VON EISELSBERG. Deutscher chir. Kong., 1913. [270]

Brain surgery. F. KRAUSE. Deutscher chir. Kong., 1913. [270]

Experiments with a view to combating paralysis of respiration in operations on the brain by means of Meltzer's insufflation. UNGER. Arch. f. klin. Chir., 1913, ci, No. 1.

Clinical symptoms of cerebellar lesions and experimental data. E. POGGIO. Riv. crit. di clin. med., 1913, xiv, 257.

Cerebellar tumor; glioma; operation; recovery. M. MAILHOUSE and W. F. VERDI. J. Nerv. & Ment. Dis., 1913, xl, No. 5.

Tumors of the cerebello-pontine angle. A. W. LUEKE. Cleveland M. J., 1913, xii, 325.

Changes in the hypophysis in acromegaly. POINDECK-ER. Wien. med. Wchnschr., 1913, xxvi, No. 19.

Genital and thyroge-nital hypophyseal adiposity. BRDLIK. Čas. lek., česk., Prague, 1913, lii, No. 16.

Carcinoma of a hyperplastic hypophysis. J. FUNKE. N. Y. M. J., 1913, xcvi, 976.

Classification of tumors of the pituitary body. G. V. BONIN. Brit. M. J., 1913, i, 934.

Report of two cases with tumors, originating from the region of the pituitary body. F. PFISTER. Wis. M. J., 1913, xi, 391.

Gumma of the pituitary body; acromegalic symptoms. UTHY. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 2.

The histological structure of the pineal gland. F. K. WALTER. Sitzungs-b. u. Abhandl. d. naturforsch. Gesellsch. zu Rostock, 1913, v, N. F. [271]

The functions of the pineal gland, with report of feeding

experiments. C. L. DANA and W. N. BERKELEY. Med. Rec., 1913, lxxxiii, 835. [271]

Pathology and operability of tumors of the pineal gland. RORSCHACH. Beitr. z. klin. Chir., 1913, lxxxiii, 451. [272]

Neck

Clinical study of deep suppuration on the neck. F. F. PISANO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 503.

Treatment of cervical cellulitis. F. T. BROUGH. Med. World, 1913, xxxi, 190.

Tuberculosis of the lymph glands of the neck and its relation to the tonsils and the lung. G. TRAUTMANN. München. med. Wchnschr., 1913, lx, 866. [272]

A case of hyomandibular fistula. H. KÜTTNER. Deutsche med. Wchnschr., 1913, xxxix, 489. [272]

A case of symmetrical cervical adenolipomatosis. MILLIONI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 58.

Spasmodic torticollis; notes on the etiology in two cases. W. F. SCHALLER. J. Am. M. Ass., 1913, lx, 1421.

On the question of the existence of an ossified arch of the hyoid bone in man. A. A. DESCHIN. Chirurgia, St. Petersburg, 1913, xxxiii, 283.

The evolution of the thyroid gland. D. MARINE. Bull. Johns Hopkins Hosp., 1913, xxiv, 135. [273]

The relationship of the thyroid gland to alimentary toxæmia. F. LANGMEAD. Lancet, Lond., 1913, clxxxiv, 1370.

The thyroid function in its relation to some morbid conditions. DOMINICI. Clin. chir., Milano, 1913, xxi, No. 4.

Pathological-anatomical changes in the diseased thyroid gland. TOMAZEWSKI. Russk. Vrach, St. Petersburg, 1913, xii, 500.

Acute non-suppurative thyroiditis. W. LUBLINSKI. Berl. klin. Wchnschr., 1913, l, 834.

Syphilis of the thyroid; its histological analogies with tuberculosis. FAVRE and SAVY. Lyon chir., 1913, ix, 511. [273]

Echinococcus cysts of the thyroid gland. GATTI. Clin. chir., Milano, 1913, xxi, No. 4.

Malignant tumors of the thyroid gland. A. W. BLAIN. Internat. J. Surg., 1913, xxvi, 166.

Our present conception of hyperthyroidism. W. H. LOHMAN. Long Island M. J., 1913, vii, 181.

The effect of experimental hyperthyroidism upon the calcium content of the blood. SARVONAT and ROUBIER. Compt. rend. hebd. Soc. biol., Par., 1913, lxxiv, 897.

The relations between endemic goiter and radioactivity. E. HESSE. Deutsche Arch. f. klin. Med., 1913, cx, 338.

Organolytic ferments in the serum in endemic goiter. J. BAUER. Wien. klin. Wchnschr., 1913, xxvi, 606.

Exophthalmic goiter and its varieties; disfiguring, grave, and acute; prognosis and treatment. DEJERINE. Rev. Internat. de med. et de chir. prat., Par., 1913, xxiv, 103.

Case of exophthalmic goiter cured by X-ray. S. TOUSEY. Med. Rec., 1913, lxxxiii, 849.

Ligation in hyperthyroidism. G. M. TODD. Am. J. Surg., 1913, xxvii, 176.

Is bilateral resection or unilateral extirpation of the thyroid preferable? A. TIETZE. Berl. klin. Wchnschr., 1913, i, 99. [274]

Basedow's disease. GINESTOUX and LAUTIER. Province méd., Par., 1913, xxvi, No. 21.

The frequent occurrence of light cases of Basedow's disease and the favorable effect upon them of hygienic and climatic factors. KUHN. Med. Klin., 1913, ix, No. 21.

Pathogenesis of Basedow's disease and its treatment by Vassal's fluid thyroïdin. MARCHETTI. Riforma med., 1913, xxix, No. 19.

A case of infantile Basedow's disease. K. HOCHSINGER. Mitt. d. Gesellsch. f. inn. Med. u. Kinderh. in Wien, 1913, xii, 11.

The mental condition in Basedow's disease. MARGAROT and CAIZERGUES. Montpellier méd., Par., 1913, xxxvi, Nos. 19, 20.

Attempts to influence Basedow's disease by means of X-ray treatment of the ovaries. MANNABERG. Wien. klin. Wchnschr., 1913, xxvi, No. 18.

Deep Röntgenology in Basedow's disease and in myoma. MOSES. München. med. Wchnschr., 1913, lx, 1062.

SURGERY OF THE CHEST

Chest Wall and Breast

Tumors of the breast. D. C. BROCKMAN. Iowa M. J., 1913, xix, 550.

Small mammary neoplasms. R. T. MORRIS. Internat. J. Surg., 1913, xxvi, 155.

Primary epithelioma of the nipple in a girl aged eleven. BATTLE and MAYBURY. Lancet, Lond., 1913, clxxxiv, 1521.

Carcinoma of the mamma. S. D. SWOPE. N. Mex. M. J., 1913, x, 53.

Carcinoma of the mammary gland. KRONHEIMER. München. med. Wchnschr., 1913, lx, 1179.

Cancer of the mammary gland. JABOULAY. Rev. internat. de méd. et de chir., Par., 1913, xxiv, 1.

Epitheliomata of the breast in man. SIMEONI. Riforma med., 1913, xxix, No. 20.

Tumors of the mammary gland in men. F. MIESCHER. Cor.-Bl. f. schweiz. Ärzte, 1913, xliii, 551.

Paget's disease. SINOSERSKY. Chir. arch. Veliaminova, St. Petersburg., 1913, xxix, No. 2.

Paget's disease of the nipple. HILBERS. Nederl. Tijdschr. v. Geneesk., 1913, i, No. 16.

Paget's disease of the nipple. GAARENSTROM. Nederl. Tijdschr. v. Geneesk., 1913, i, No. 9.

Æsthetic treatment of abscess of the breast. MORESTIN. Gaz. d. hôp., Par., 1913, lxxxvi, No. 59.

Surgical importance of the breast. E. D. MARTIN. Southern M. J., 1913, vi, 327.

Fractures of the sternum. W. VON BRUNN. Zentralbl. f. Chir., 1913, xl, 633.

Enchondroma of the manubrium sterni successfully removed by operation. W. G. RICHARDSON. Brit. M. J., 1913, i, 985.

Enchondroma of the scapula. W. D. MININGHAM. N. Y. M. J., 1913, xcvi, 1128.

Osteosarcoma of the shoulder-blade. GUACCERO. Clin. chir., Milano, 1913, xxi, No. 4.

Penetrating combined thoracic and abdominal wounds. GULEKE. Deutscher chir. Kong., 1913. [274]

Case of congenital thoracic deformity. CROOKSHANK and BOYD. Proc. Roy. Soc. Med., 1913, vi, Sect. Dis. Children, 152. [274]

A wound of the chest complicated by injury of the internal mammary artery. DESGOUTTES and LAMBERT. Lyon méd., Par., 1913, cxx, No. 19.

On the question of artificial pneumothorax. L. HOFBAUER. Ztschr. f. physikal. u. diätet. Therap., 1913, xvii, 265.

The practical value of the indications and contraindications for artificial pneumothorax in the treatment of pulmonary tuberculosis. BURNAND. Rev. méd. de la Suisse Rom., Geneve, 1913, xxxiii, No. 4.

Fulminant secondary hæmothorax. LARDENNOIS. Gaz. d. hôp., Par., 1913, lxxxvi, No. 56.

Malignant primary tumor of the pleura. LESIEUR, SAVY and MAZEL. Arch. de méd. exp. et d'anat. Path., Par., 1913, xxv, No. 3.

An abnormal vein in the mediastinal region. DELATTRE. J. d. sc. méd. de Lille, 1913, xxxvi, No. 18.

False diagnosis of croup in children affected with tuberculosis of the bronchial glands and of the body of the vertebræ. M. MICHALOWITSCH. Pädiat., 1913, iv, 121.

Diagnosis of thoracic gland tuberculosis in childhood. J. C. ABBOTT. W. Va. M. J., 1913, vii, 371.

The thymus and the other ductless glands. R. PARK. Cleveland M. J., 1913, xii, 329. [274]

About thymus and the combination of thymus-hyperplasia with Basedow's disease. A. ELSAESSER. Ohio St. M. J., 1913, ix, 220.

Polynuclear leucocytosis in the thymus gland following X-ray treatment. REGAUD and CREMIEN. Compt. rend. Soc. de biol., Par., 1913, lxxiv, 862.

Report of two cases of enlarged thymus. H. A. HULL. Iowa M. J., 1913, xix, 557.

Röntgen ray treatment of thymus hypertrophy. C. W. WYCKOFF. Cleveland M. J., 1913, xii, 341. [275]

Trachea and Lungs

My new method for radiographic representation of the larynx and the trachea. A. RÉTHI. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 27.

Clinical contributions on the etiology and symptomatology of intratracheal stenosis. G. COHN. Ztschr. f. Laryngol. u. i. Grenzgeb., 1913, vi, 35.

Operations for tracheal tumors. BROECKAERT. Ann. Soc. belge de Chir., 1913, xxxi, 38. [275]

The surgical treatment of bronchiectasis. BATZDORFF. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, Nos. 5-6.

Injuries to lungs and pleura; with report of a case. P. Z. McDONALD. Illinois M. J., 1913, xxiii, 497.

Operative or conservative treatment of injuries of the lung by pointed instruments. E. VON KUTSCHA. Wien. klin. Wchnschr., 1913, xxvi, 737.

Gangrene of the lung and its treatment. G. TREUPEL. Deutsche med. Wchnschr., 1913, xxxix, 777.

Ossification of the lung. OSSLAN. Riv. osp., Roma, 1913, iii, No. 9.

Primary carcinoma of the lung. M. S. GESSELEWITSCH. Vrach. Gaz., St. Petersburg., 1913, xx, 527.

The so-called "Schneeberger" pulmonary cancer. ARNSTEIN. Wien. klin. Wchnschr., 1913, xxvi, No. 19.

Generalized cancerous lymphangitis of the lung. BERNARD and CAIN. Arch. de méd. exp. et d'anat. Path., Par., 1913, xxv, No. 3.

The operative treatment of lung embolism. SCHUMACHER. Deutscher chir. Kong., 1913. [275]

A pulmonary abscess which developed a long time after typhoid. GIORDANO. Riforma med., 1913, xxix, No. 20.

A case of Wilms' operation for unilateral pulmonary tuberculosis. L. MAYER and N. GEERAERD. J. méd. de Bruxelles, 1913, xviii, 140.

Emphysema. PLESCH. Deutsche med. Wchnschr., 1913, xxxix, No. 19.

A contribution on Freund's emphysema operation. JESSEN. München. med. Wchnschr., 1913, lx, No. 19.

Effect of extensive resection of the thoracic wall on marked pulmonary emphysema. FRIEDERICH. Deutscher chir. Kong., 1913. [276]

Experiences in surgery on the superior respiratory and digestive tracts. GLUCK. Berl. klin. Wchnschr., 1913, l, No. 21.

Heart and Vascular System

Further experience of the cardiac sign in cancer. W. GORDON. Brit. M. J., 1913, i, 1152.

The surgery of the heart and the pericardium. JAS. RAE. Universal M. Rec., 1913, iii, 391.

Sequel of a case of cardiolytic. R. SIMON. Brit. M. J., 1913, i, 1050.

The question of cardiac suture. A. DROSDOW. Med. Rundschau, 1913, lxxxix, 439.

Pharynx and Oesophagus

Diagnosis and treatment of foreign bodies in the oesophagus. A. JURASZ. Ergebn. d. Chir. u. Orthop., 1913, v, 361.

Foreign bodies in the oesophagus. P. LE JEUNE. Ann. Soc. méd.-chir. de Liege, 1913, lii, 56.

Foreign body in the oesophagus removed by oesophagoscopy; 2. Foreign body in bronchial tract. H. DUPUY. New Orleans M. & S. J., 1913, lxxv, 815.

Oesophagotracheal fistula, with recurrent paralysis caused by a foreign body in the oesophagus. M. KÖNIGSTEIN. Monatschr. f. Ohrenheilk. u. Laryngo-Rhinol., Berl., 1913, xlvii, 522.

Spasms of the superior extremity of the oesophagus. RABASA. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 2.

The treatment of cicatricial stenoses of the oesophagus, with special consideration of internal oesophagotomy. H. MARSHIK. Monatschr. f. Ohrenheilk. u. Laryngo-Rhinol., Berl., 1913, xlvii, 279.

Treatment and diagnosis of cicatricial stenoses of the oesophagus. GUISEZ. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxv, No. 2.

Chronic inflammatory stenosis of the cardiac region of the oesophagus. LIEBAULT. Inaugural thèse, Par., 1913. [276]

Cancer of oesophagus from the point of view of thoracic surgery. W. MEYER. Arch. f. klin. Chir., 1913, c, 716.

The surgical treatment of cancer of the oesophagus. W. MEYER. Med. Rec., 1913, lxxxiii, 888. [276]

The first successful resection of the thoracic portion of the oesophagus for carcinoma; a preliminary report. F. TOREK. J. Am. M. Ass., 1913, lx, 1533.

Further contributions on surgery of the oesophagus. REHN. Zentralbl. f. Chir., 1913, xl, 558.

Plastic surgery of the oesophagus from the gastric wall. E. PFLAUMER. Zentralbl. f. Chir., 1913, xl, 684.

Miscellaneous

Röntgen diagnosis of intra-thoracic lesions. A. L. GRAY. Southern M. J., 1913, vi, 295.

Some remarks on the diagnosis of primary intrathoracic malignant disease. W. H. M. TELLING. Clin. J., 1913, xlii, 65.

Endoscopic diagnosis and treatment of endothoracic tumors. A. EPHRAIM. Berl. klin. Wchnschr., 1913, l, 685.

Thoracic surgery and the procedure of producing differences in pressure (hypo- and hyperpressure). STEINMANN. Rev. suisse de méd., 1913, No. 17.

Intervention in injuries of the chest by fire-arms. J. P. TOURNEUX. Bull. méd., Par., 1913, xxvii, 414.

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

An oblique transverse incision for operations on the gall-bladder and bile ducts. MARIEN. Union méd. du Canada, Montreal, 1913, xlii, 7. [277]

Experimental data on the question of abdominal drainage. PETROFF. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, No. 2.

A cystic tumor of the abdominal wall. H. WOLLIN. Prag. med. Wchnschr., 1913, xxxviii, 205.

Acute suppurative lymphadenitis, abdominal, due to a diplostreptococcus; autopsy. O. W. H. MITCHELL. Am. J. M. Sc., 1913, cxlv, 721.

The surgical treatment of pendulous abdomen. J. MCKENTY. Canad. M. Ass. J., 1913, iii, 355.

The subject of peritonitis. ENDERLEN. Beitr. z. klin. Chir., 1913, lxxxiii, 593. [277]

Should we operate during the intermediate stage of acute peritonitis? BERTELSMANN. Deutsche Ztschr. f. chir., 1913, cxvii, 155.

New methods in the treatment of acute peritonitis. P. A. A. GARY. Arch. de méd. et de pharm. mil., Par., 1913, lxi, 159.

Biliary peritonitis without perforation of the gall-bladder or the bile-ducts. JOHANSSON. Hygiea, Stockholm, 1913, lxxv, No. 4.

Diffuse pneumococcal peritonitis of hæmatogenous origin. SBROZZI. Rev. osp., Roma, 1913, iii, No. 9.

A case of peritonitis caused by verminous perforation. URECHIA and BRUTEANU. Spitalul, Bucuresci, 1913, xxxiii, No. 4.

A case of fatal peritonitis following dilatation by laminaria. HUSSY. München. med. Wchnschr., 1913, lx, No. 17.

A case of tuberculous peritonitis in a child. W. A. STOOPS. Physician & Surg., 1913, xxxv, 213.

Tuberculous peritonitis, operated twice, with subsequent normal pregnancy. DELASSUS. Rev. prat. d'obst. et de gynéc., Par., 1913, xxi, 110.

The anascitic form of tuberculous peritonitis. ARMANS-DELILLE. Presse méd., Par., 1913, xxi, No. 40.

Direct treatment of tuberculous peritonitis by means of iodine preparations. FALKNER. München. med. Wchnschr., 1913, lx, No. 18.

The treatment of peritonitis by camphorated oil. HUGEL. Beitr. z. klin. Chir., 1913, lxxxiii, 606.

Diagnosis and treatment of ascites. ABELGY. Bull. gén. de thérap. méd., chir., obst. et pharm., Par., 1913, clxv, 33.

Plastic repair of defects of the diaphragm by means of fascia lata. IKONNIKOFF and SMIRNOFF. Zentralbl. f. Chir., 1913, xl, 761.

The technique of removing the lymphatics of the inguinal region. CONSTANTINI. Progrès méd., Par., 1913, xli, No. 18.

Hernias. SCHLOFFER. Med. Klin., 1913, ix, 45.

- Congenital hernia of the diaphragm. H. RISCHBIETH. Australas. M. Gaz., 1913, xxxiii, 359.
- Congenital diaphragmatic hernia in a child three years old. REISZ. Jahrb. f. Kinderh., 1913, xxvii, No. 5.
- Umbilical hernia. C. D. WHEELCHER. Hosp. Bull. Univ. Md., 1913, ix, 46.
- Epigastric hernia and digestive disturbances. EVELY. Policlin., Brux., 1913, xxii, No. 8.
- A case of hernia and rupture of the large pectoral muscle. TCHERNIABSK. Voienno-med. J., St. Petersb., 1913, ccxxvi, April.
- Cooper's hernia. KRYMOW. Arch. f. klin. Chir., 1913, ci, No. 2.
- Pectineal hernia. MANTELLI. Policlin., Roma, 1913, xx, No. 5.
- Intestinal troubles caused by hernia in nurselings. DUBOIS. Scalpel et Liège méd., 1913, lxxv, No. 45.
- A method of operating for radical cure of inguinal hernia. T. W. F. DAVIES. Transvaal M. J., 1913, viii, 249.
- Two successful cases of operation for strangulated inguinal hernia in female infants, of the ages of 22 and 17 days. WHITELOCKE. Proc. Roy. Soc. Med., 1913, vi, Sect. Dis. Children, 190. [277]
- A new plastic aponeurotic method for the cure of direct inguinal hernia. C. SANTINI. Bull. d. sc. méd., di Bologna, 1913, lxxxiv, 201. [278]
- Partial separation of the mesentery in a case of strangulated hernia. G. SABATINI. Clin. chir., Milano, 1913, xxi, 796.
- The X-ray treatment of hernias. BAROM and BARSONY. Beitr. z. klin. Chir., 1913, lxxxiv, 265.
- Circumscribed formation of tumors in the abdominal cavity, starting from the omentum. SCHMIEDEN. Berl. klin. Wchnschr., 1913, I, No. 20.
- The development of tumors of the omentum. E. HOLLÄNDER. Deutsche med. Wchnschr., 1913, xxxix, 845.
- Inflammatory tumors of the omentum. VARISCO. Gazz. med. ital., Torino, 1913, lxiv, No. 21.
- Abscesses in the omental sac following necrosis of the pancreas. A. BITTORF. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, 109.
- Surgical diseases and injuries of the mesentery and the omentum. PRUTZ and MONNIER. Deutsche Chir., Liefg., 46 k. Stuttgart: Enke, 1913. [278]
- Cystic lymphangioma of the mesentery. D. RÓNA. Beitr. z. klin. Chir., 1913, lxxxiv, 122.
- Hæmorrhagic, mesenteric, and retroperitoneal cysts. CARTOLARI. Clin. chir., Milano, 1913, xxi, No. 4.
- Multiple chylous cysts of the mesentery in a girl seven years of age; volvulus associated with intestinal perforation and diffuse peritonitis. K. POULSEN. Arch. f. klin. Chir., 1913, ci, 139.
- Urachal fistula. MITCHELL. Brit. M. J., 1913, i, 984.
- Intestinal diverticulitis. D. P. MAYHEW. Colo. Med., 1913, x, 148.
- Inflammatory affections which start from acquired diverticuli of the sigmoid flexure. C. EISENBERG. Beitr. z. klin. Chir., 1913, lxxxiii, 627.
- Remarks on intra-abdominal developmental adhesions. GRAY and ANDERSON. Lancet, Lond., 1913, clxxxiv, 1300.
- Methods and results of röntgenology of the stomach. O. HESSE. Ztschr. f. Röntgenk., 1913, xv, 80.
- The röntgenological behavior of the stomach in gastric crises and in the process of vomiting. CZYHLARZ and SELKA. Wien. klin. Wchnschr., 1913, xxvi, No. 21.
- Gastroptosis and colptosis transversa as seen from post-mortem examinations. K. M. LYNCH. N. Y. M. J., 1913, xxvii, 1090.
- Bilocular stomach. TUFFIER and ROUX-BERGER. Presse méd., Par., 1913, xxi, No. 37.
- A case of bilocular stomach, diagnosed by means of radiography and operated by the procedure of gastro-anastomosis. VIGNARD. Ann. internat. de chir. gastro-intestinale, 1913, vii, No. 1.
- A case of hour-glass stomach caused by adhesive tuberculous peritonitis. FISCHER. Cor.-Bl. f. schweiz. Ärzte, 1913, xliii, No. 20.
- Bursting rupture of the stomach of extraordinary extent. J. D. SINGLEY. J. Am. M. Ass., 1913, lx, 1535.
- Tuberculosis of the stomach. ZETAS. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, Nos. 5-6.
- Combined tuberculosis and carcinoma of the stomach, with a report of a case upon which a partial gastrectomy was performed. H. H. M. LYLE. Am. J. M. Sc., 1913, cxlv, 691. [280]
- Gastric cancer. J. SMITH. J. Okla. St. M. Ass., 1913, v, 541.
- Carcinoma of the stomach. J. V. O'CONNOR. N. Y. M. J., 1913, xxvii, 926.
- A lecture on some points in the early diagnosis of cancer of the stomach. M. MORRIS. Brit. M. J., 1913, i, 1041.
- The early diagnosis of cancer of the stomach. J. H. MUSSER. Penn. M. J., 1913, xvi, 629.
- The dissolved albumin test for gastric cancer. F. W. ROLPH. Med. Rec., 1913, lxxxiii, 848.
- Researches on a nematode as causal factor in a case of papillomatous and carcinomatous tumor in the stomach of a rat. FBIGER. Hosp.-Tid., Kjøbenhavn, 1913, lvi, No. 17.
- The exposure of inoperable carcinomata of the stomach to the X-ray and the results obtained. H. FINSTERER. München. med. Wchnschr., 1913, lx, 855. [280]
- Surgery of gastric carcinoma. ALTSCHUL. Beitr. z. klin. Chir., 1913, lxxxiv, No. 2.
- Cysto-diagnosis in ulcer and cancer of the stomach. SAVESCU. Spitalul, 1913, xxxiii, No. 6.
- Gastric ulcer. ALFRED JORDAN. Proc. Roy. Soc. Med., 1913, vi, Electro-Therap. Sect., 117. [280]
- Diagnosis and treatment of ulcer of the stomach. PETRÉN. Hygiea, Stockholm, 1913, lxxv, No. 4.
- The diagnosis and treatment of gastric and duodenal ulcers. S. D. MOLYNEUX. Penn. M. J., 1913, xvi, 624.
- The pathogenesis of gastric ulcers. KATZENSTEIN. Arch. f. klin. Chir., 1913, ci, No. 1.
- Symptomatology of gastric and duodenal ulcers. F. NANCE. Hosp. Bull. Univ. Md., 1913, ix, 45.
- Experimental production of gastric and intestinal ulcers. GUNDERMANN. Arch. f. klin. Chir., 1913, ci, No. 2.
- Relation of gastric and duodenal ulcer to vascular lesion. W. OPHÜLS. Arch. Internal Med., 1913, xi, No. 5.
- On the frequency of the transition of ulcer of the stomach into cancer. J. FREIDENWALD. Boston M. & S. J., 1913, clxviii, 796. [281]
- Contribution to the treatment of perforated gastric and duodenal ulcers. L. SIMON. Beitr. z. klin. Chir., 1913, lxxxiii, 26. [281]
- Perforation of a chronic latent ulcer of the stomach; perigastritis; subphrenic abscess as a secondary symptom. LARA. Rev. ibero-amer. de cienc. med., 1913, xxix, No. 104.

Gastro-Intestinal Tract

When is operative treatment indicated in chronic dyspepsia? W. H. WATHEN. Illinois M. J., 1913, xxiii, 485.

Radiological diagnosis of stomach diseases. BOIDI-TROTTI. Gazz. med. ital., Torino, 1913, lxiv, No. 17.

Röntgenological diagnosis of stomach diseases. M. EHRENREICH. Berl. klin. Wchnschr., 1913, I, 734.

- Gastric ulcer in the new-born. VON MIELECKI. Berl. klin. Wchnschr., 1913, l, 564. [282]
- The surgical aspect of gastric ulcer. J. C. KENNEDY. N. Y. M. J., 1913, xcvi, 1031.
- The operative method in ulcus ventriculi. KÖNIG. Zentralbl. f. Chir., 1913, xl, 601.
- Results of operation for gastric ulcer, a plea for radical operation when operation is indicated. A. F. R. ANDRESEN. Med. Rec., 1913, lxxxiii, 793.
- Technique of resections of the stomach and large intestine. GELINSKY. Zentralbl. f. Chir., 1913, xl, No. 19.
- Simultaneous resection of the stomach and the transverse colon. GOULLIQUET. Lyon chir., 1913, ix, No. 5.
- Mobilization and topography of the stomach and the duodenum in operations on the stomach and the lower portion of the oesophagus. H. BRUN. Beitr. z. klin. Chir., 1913, lxxxiv, 305.
- Total transthoracic gastrectomy in the dog. S. VERNON. Arch. per le sc. méd., 1913, xxxvii, 42.
- Acute post-operative dilatation of the stomach and its pathogenesis. A. ARCANGELI. Clin. chir., Milano, 1913, xxi, 535.
- Pylorospasm and gastric ulcer. A. NEUDÖRFER. München. med. Wchnschr., 1913, lx, 760. [282]
- Pylorospasm with gastric tetany. R. L. PITFIELD. N. Y. M. J., 1913, xcvi, 1129.
- Benign pyloric stenosis. L. J. HAMMOND. Penn. M. J., 1913, xvi, 620.
- Contribution to the study of stenosing tuberculosis of the pylorus. DAUWE. Arch. de mal. de l'appar. digest et de nutrit., 1913, vii, 218. [282]
- The diagnosis and treatment of chronic ulcer of the pylorus. FAULHABER. München. med. Wchnschr., 1913, lx, 915.
- Preliminary report on the diagnosis of post-pyloric (duodenal) ulcer by means of serial radiography. L. G. COLE. N. Y. M. J., 1913, xcvi, 960.
- Indications and technique of exclusion of the pylorus. K. BORSÉKY. Beitr. z. klin. Chir., 1913, lxxxiv, 179.
- The duodenal tube. L. A. DOROFF. N. Y. M. J., 1913, xcvi, 980.
- Duodenal ulcer. V. PLITEK. Arch. f. Verdauungs-Krankh., 1913, xix, 197. [282]
- Duodenal ulcer. SCHMIEDEN. Deutscher chir. Kong., 1913. [283]
- Duodenal ulcer. A. SPILMAN. Iowa M. J., 1913, xix, 546.
- Duodenal ulcers. KÜTTNER. Arch. f. klin. Chir., 1913, ci, No. 2.
- Pathological data obtained from ulcers excised from the anterior wall of the duodenum. W. J. MAYO. Ann. Surg., Phila., 1913, lvii, 691. [283]
- Remarks on fatal hemorrhage from erosion of the gastroduodenal artery by duodenal ulcers. J. E. THOMPSON. Ann. Surg., Phila., 1913, lvii, 695.
- Acute perforated duodenal and gastric ulcers. J. B. DEEVER. Ann. Surg., Phila., 1913, lvii, 703. [284]
- Primary carcinoma of the jejunum and ileum. VENOT and PARCELIER. Rev. de chir., Par., 1913, xxxiii, No. 5.
- Peptic ulcer of the jejunum. VON HABERER. Deutscher chir. Kong., 1913. [284]
- Accidents and technique of jejunostomy. BÉARD and ALAMARTINE. Rev. de chir., Par., 1913, xxxiii, No. 5.
- A few surgical complications in the abdomen in typhoid fever. CHAS. M. REMSEN. Southern M. J., 1913, vi, 320.
- Remarks on stenosis of the small intestine. J. SCHMIDT. München. med. Wchnschr., 1913, lx, 919.
- Acute angulation of the terminal ileum as a cause of intestinal obstructions in certain cases of acute appendicitis. D. CHEEVER. Boston M. & S. J., 1913, clxviii, 719. [284]
- A case of ileus, caused by obliteration of a diverticulum of Meckel. G. BREN. Wien. med. Wchnschr., 1913, lxiii, 824.
- Late ileus consequent upon total vaginal hysterectomy. SCHUTZE. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, No. 5.
- Arterio-mesenteric ileus. A. ACH. Beitr. z. klin. Chir., 1913, lxxxiii, 721. [285]
- Post-operative ileus. H. B. SWEETSER. St. Paul M. J., 1913, xv, 210.
- A lecture on intussusception. H. S. SOUTTAR. Brit. M. J., 1913, i, 977.
- Clinical study of slow and progressive occlusion of the small intestine. MATHIEU. Gaz. d. hôp., Par., 1913, lxxxvi, No. 57.
- Internal strangulation; peritonitis. BLANQUINQUE. J. d. praticiens, 1913, xxvii, No. 19.
- Intestinal occlusion caused by a biliary calculus incarcerated near the ileocaecal valve; remnants of an extra-uterine pregnancy. DUFOUR, DESMAREST, and LEGRAS. Bull. et mém. Soc. méd. d. hôp. de Par., 1913, xxix, 838.
- A case of polyposis of the ileum. SORGE. Med. Klin., 1913, ix, No. 19.
- Melanosis of the intestinal mucous membrane. HENSCHEN and GERGSTRAND. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvi, 103.
- Thrombosed varicose veins of the small intestine CADE, PALLASSE and GRAVIER. Lyon méd., 1913, cxx, 914.
- The treatment of post-operative paralysis of the intestines. W. PETTENKOFER. Beitr. z. klin. Chir., 1913, lxxxiii, 615.
- Traumatic rupture of intestines; operation, recovery. D. P. CARD. Mil. Surg., 1913, xxxii, 481.
- The technique of temporary enterostomy in peritonitis and states of inanition. VON STUBENRAUCH. Beitr. z. klin. Chir., 1913, lxxxiii, 608.
- A rare indication for resection of the intestine. C. SULTAN. München. med. Wchnschr., 1913, lx, 761.
- Insufficiency of the ileocaecal valve studied in the röntgen ray picture. GRÖDEL. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 2.
- Accidents attributable to the dilatation of the caecum and to pericolicitis of the ascending colon and its hepatic angle. ALGALVE. Presse méd., Par., 1913, xxi, No. 41.
- Hypertrophic tuberculosis of the caecum. MONZARDO. Riforma méd., 1913, xxix, No. 21.
- Caecal fistula (appendicostomy and caecostomy). PAUCHET. Clinique, Par., 1913, viii, No. 21.
- The operative treatment of caecum mobile. L. BURKHARDT. Beitr. z. klin. Chir., 1913, lxxxiii, 642.
- Jackson's membrane. H. W. BAKER. Boston M. & S. J., 1913, clxviii, 766.
- Membranous pericolicitis. MAUCLAIRE. Rev. internat. de méd. et de chir., 1913, xxiv, 22.
- Abdominal adhesions and kinks. F. FINNEY. Colo. Med., 1913, x, 155.
- Radiographic representation of the vermiform appendix. COHN. München. med. Wchnschr., 1913, lx, No. 19.
- The present value of blood analyses in appendicitis and in free progressive appendicitic peritonitis. W. SCHULTZE. Mitt. a. d. Grenzgeb. d. med. u. Chir., 1913, xxvi, 61.
- Conditions simulating appendicitis. H. W. CARSON. Clin. J., 1913, xlii, 90.
- Appendicitis; its relation to gynecology and obstetrics. PUPPEL. Gynäk. Rundschau, 1913, vii, No. 10.
- Carcinoma of the appendix. E. MÜLLER. Arch. f. klin. Chir., 1913, ci, 198.
- Carcinoma and carcinoid of the appendix. ROGGE. Ztschr. f. Krebsforsch., 1913, xiii, No. 2.

A case of cystic development in the vermiform appendix, associated with the secondary formation of a number of diverticuli. MARKOFF. Kharkovsky med. J., 1913, xv, No. 3.

Inflammatory diverticuli of the appendix. TICHOMIROFF. Vrach. Gaz., St. Petersburg, 1913, xx, No. 17.

Appendicitis and tuberculosis. BÉRARD and ALAMARTINE. Lyon chir., 1913, ix, No. 5.

Actinomycosis of the vermiform appendix. T. HÜTTL. Beitr. z. klin. Chir., 1913, lxxxiv, 291.

The occurrence of oxyuris vermicularis in the diseased extirpated vermiform appendix of the adult. RHEINDORF. Med. Klin., 1913, ix, 623.

Perforative appendicitis and peritonitis. W. D. HAINES. Lancet-Clin., 1913, cix, 570.

Strangulated hernia of the appendix; a contribution to the etiology of appendicitis. SASSE. Deutsche med. Wchnschr., 1913, xxxix, No. 20.

The appendix and herniary appendicitis; appendectomy in the radical cure of crural hernia. NORRLIN. Hygiea, Stockholm, 1913, lxxv, No. 4.

Some researches on hepatic insufficiency in appendicitis. DUVERGEY. Paris méd., 1913, ii, No. 23.

Chronic appendicitis. A. KRECKE. München. med. Wchnschr., 1913, lx, 572.

Chronic pseudo-appendicitis. PAUCHET. Clinique, Par., 1913, viii, No. 19.

A case of appendicitis. H. A. SPENCER. Transvaal M. J., 1913, viii, 251.

Anæsthesia of the right iliac region for operation in chronic appendicitis. H. FOWELIN. Zentralbl. f. Chir., 1913, xl, 342. [285]

Results of 601 operations for appendicitis with special consideration of early operation. J. DENK. Beitr. z. klin. Chir., 1913, lxxxiv, 481.

The treatment of acute suppurative appendicitis. C. LOUGARD. Arch. f. klin. Chir., 1913, ci, 123. [286]

A note on the treatment of diffuse and spreading appendicular peritonitis; summary of 78 cases. R. H. FOWLER. Am. J. Surg., 1913, xxvii, 189. [286]

Appendicostomy. ARNAUD. J. de chir., 1913, x, 273. [286]

The influence of the sympathetic nerve and autonomous nerves on the movements of the large intestine. G. BOEHM. Arch. f. exp. Path. u. Pharmacol., 1913, lxxii, 1.

A case of enteroliths. J. ANDERSON. Brit. M. J., 1913, i, 931.

Severe chronic colitis. ROSENHEIM. Deutsche med. Wchnschr., 1913, xxxix, No. 21.

A case of ectasis of the large intestine. WEIZENFELD. Pract. Vrach., St. Petersburg, 1913, xii, 187.

Ptoisis of the colon; its relation to auto-intoxication and neurasthenia. J. E. GREIWE. Lancet-Clin., 1913, cix, 558.

A case of Hirschsprung's disease. L. EXCHAQUET. Schweiz. Rundschau f. Med., 1913, xiii, 540.

A case of intestinal occlusion as a result of megacolon in situs inversus. T. V. CALDESI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 455.

Treatment of megacolon. PAUCHET. Ann. internat. de chir. gastro-intestinale, Par., 1913, vii, No. 1.

Chronic intestinal stasis. C. H. FAGGE. Lancet, Lond., 1913, clxxxiv, 1298.

Surgical treatment of intestinal stasis. S. HORSLEY. Lancet-Clin., 1913, cix, 501.

Late sequelæ of exclusion of the large intestine by entero-anastomosis between the ileum and the sigmoid flexure. BECK. Beitr. z. klin. Chir., 1913, lxxxiv, No. 2.

On transverse colostomy as the operation of election. L. MCGAVIN. Brit. M. J., 1913, i, 980.

Resection of one-third of the colon for irreducible intussusception in an infant five days old. C. N. DOWD. Ann. Surg., Phila., 1913, lvii, 713.

An attempt at surgical treatment of intestinal bilharziasis by evisceration and high resection of the ano-recto-sigmoid mucous membrane. LEGRAND. Rev. med. d'Egypte, 1913, i, 10. [287]

Early diagnosis of carcinomata of the sigmoid flexure and of the ampulla recti. H. FRIEDRICH. Med. Klin., 1913, ix, 210.

Circumscribed cylindro-epithelial adenomatous carcinoma of the sigmoid flexure. WEINBRENNER. München. med. Wchnschr., 1913, lx, 1232.

Operative treatment of the ulcers of the sigmoid flexure and rectum. RYDYGIER. Przegl. chir. i ginek., 1913, viii, 54. [288]

Benign polypi of the rectum and of the sigmoid flexure. DECKER. München. med. Wchnschr., 1913, lx, 589.

Hæmorrhages from polypi of the rectum. P. MOCQUOT. Rev. de chir., Par., 1913, xxx, 474.

Primary melanotic tumors of the rectum. CHALIER and BONNET. Rev. de chir., Par., 1913, xxxiii, 64, 235, 372, 563. [288]

Palliative treatment of cancer of the rectum. CHALIER. Progrès méd., Par., 1913, xli, No. 18.

Surgical treatment of cancer of the rectum. DEPAGE and MAYER. Ann. Internat. de chir. gastro-intestinale, Par., 1913, vii, No. 1.

Retention of fæces after radical operations because of cancer of the rectum. LÖRBL. Arch. f. klin. Chir., 1913, ci, No. 2.

The suspension method of treatment for rectal prolapse. ACH. Beitr. z. klin. Chir., 1913, lxxxiii, No. 729.

Transplantation of fascia for rectopexy and nephropexy. ACH. Deutscher chir. Kong., 1913. [289]

The office treatment of diseases of the rectum. C. F. DURAND. Canad. Pract. & Rev., 1913, xxxviii, 288.

Rectoscopy. BARCELIS. Ann. d. Acad. y Lab. de cienc. med. de Catalunya, 1913, vii, No. 4.

The cause of hæmorrhoidal nodules. RECKZEH. Deutsche med. Wchnschr., 1913, xxxix, No. 19.

A new effective drug for the treatment of hæmorrhoids. KASTEIN. Allg. med. Zentral-Ztg., 1913, lxxxii, 201.

Treatment of hæmorrhoids by Boas' method. MAYBAUM. Przegl. lek., Kraków, 1913, No. 19, May.

Alimentary toxæmia. W. E. DIXON. Lancet, Lond., 1913, clxxxiv, 1295.

Changes in the digestive processes after gastro-duodenostomy, gastrojejunostomy, and after total extirpation of the stomach. DAGAEW. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, 176. [290]

Reply to Holbaum's article on the employment of iodine in operations on the digestive tract. FIEBER. Zentralbl. f. Chir., 1913, xl, No. 19.

Topography and function of the normal digestive organs, studied by the aid of radiography and by the localization of foreign bodies in their interior. ČACKOVIČ. Lijecniki Vjesnik, Agram, 1913, xxxv, No. 4 and Srpski Arc. za Tzelo-koupno lek., Belgrade, 1913, xix, No. 231.

Rare forms of hæmorrhages in the gastro-intestinal tract. STADELMANN. Berl. klin. Wchnschr., 1913, l, No. 18.

The pathological effect of the ascarides in relation to surgical affections. R. CINAGLIA. Gazz. d. osp. e d. clin., 1913, xxxiv, 450.

Liver, Pancreas, and Spleen

The necessity of the examination of the liver in the upright position. PLANTIER. Paris méd., 1913, ii, No. 25.

Anomalies of the left lobe of the human liver. G. RUGE. Morphol. Jahrb., Leipz., 1913, xlv, 409.

Injuries of the liver, according to the data of the surgical

department of the Obuchow City Hospital for men in St. Petersburg. BOLJARSKY. Russk. Vrach, 1913, xii, 287. [290]
Casuistic and experimental contributions on rupture of the liver and the bile-ducts. ORTH. Arch. f. klin. Chir., 1913, ci, No. 2.

Acute yellow atrophy of the liver. W. E. STEWART. J. Okla. St. M. Ass., 1913, v, 525.

Syphilis of the liver. T. W. STUMM. St. Paul M. J., 1913, xv, 199.

Differential diagnosis of hydatid cysts and abscesses of the liver. GAIDE. Ann. d'hyg. et de méd. colonial, Par., 1913, xvi, No. 1.

A case of abscess of the liver in appendicitis. G. J. BARDADULIN. Chirourgia, St. Petersburg, 1913, xxxiii, 214.
Costal caries as a secondary symptom of abscesses of the liver. LECOMTE. Ann. d'hyg. et de méd. colonial, Par., 1913, xvi, No. 1.

A series of twenty personally observed cases of abscess of the liver in cold climates. PERVERS and OUDARD. Arch. de méd. et de pharm. nav., Par., 1913, No. 4, April.

Sarcoma of the liver associated with bilateral diffuse sarcomatosis of the kidneys in a rooster. LUDWIG. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.

The radical operation of alveolar echinococcosis of the liver. MOUTCH. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, No. 2.

Statistical, clinical and chemical studies on the etiology of gall-stones, with special consideration of conditions in Germany and in Japan. MIYAKE. Arch. f. klin. Chir., Berl., 1913, ci, No. 1.

Treatment of gall-stones. J. PERRINS. Eclect. Rev., 1913, xvi, 139.

Chronic icterus due to retention; stenosis of the ductus choledochus; choledcho-duodenostomy. BRAULT and GRÉGOIRE. Bull. et mém. Soc. Méd. d. Hôp. de Par., 1913, xxix, 855. [291]

Acute calculous occlusion of the choledochus, with statistical and technical remarks. HEIDENHAIN. München. med. Wchnschr., 1913, lx, No. 19.

The frequency of aërophagy associated with biliary lithiasis. MAUBAN. Arch. d. mal. de l'appar. dig. et de la nutrit., Par., 1913, vii, No. 4.

Contribution to the knowledge of congenital atresia of the bile-ducts. F. VANZETTI. Arch. p. le sc. med., Torino, 1913, xxxvii, 1.

The origin of the so-called "white bile" in permanent occlusion of the choledochus. J. BERTO. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, 49.

Inhibitive action of bile on bacillus coli. E. O. JORDAN. J. Infect. Dis., 1913, xii, No. 3.

Growths in the gall-bladder and growths in the bile-ducts. S. PHILLIPS. Lancet, Lond., 1913, clxxxiv, 1442.

Acute perforation of the gall-bladder; with an account of six cases. L. R. BRAITHWAITE. Brit. M. J., 1913, i, 1096.

The complications of cholecystitis as shown by the experiences of the last three years. B. HOLMES. Lancet-Clin., 1913, cix, 534.

Cholelithiasis and cholecystitis in infancy and its treatment. KHAUTZ. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, No. 5.

Can cholelithiasis be successfully treated without operation? T. H. DELANY. Indian M. Gaz., 1913, xlviii, 180.

The technique of surgery of the gall-bladder and the bile ducts. F. C. EGGERT. Illinois M. J., 1913, xxiii, 497.

Surgery of the biliary passages. J. S. HAGEN. Eclect. M. J., 1913, lxxiii, 225.

Operative treatment of affections of the bile-ducts. PAUS. Nord. Med. Ark., Stockholm, 1913, xlv, May.

On the secretion of pancreatic juice. I. MATSUO. J. Physiol., 1913, xlv, 447.

The importance of quantitatively determining pancreatic ferments in the fæces for the diagnosis of lesions of the pancreas. P. F. ZUCCOLA. Riforma méd., 1913, xxix, 393.

Pathology of the pancreas. Cystic cavities in the islands of Langerhans. L. W. SSABOLEW. Zentralbl. f. allg. Path. u. path. Anat., 1913, xxiv, 341.

The pathology of the pancreas. APOLANT. Virchows Arch. f. path. Anat. u. f. klin. Med., 1913, ccxii, No. 2.

Pancreatic affections and rare affections of the duodenum and their value for the differential diagnosis of duodenal ulcer. FRIEDRICH. Duetscher chir. Kong., 1913. [291]

Pancreatitis. KOCH. Nederl. Tijdschr. v. Geneesk., 1913, i, No. 15.

Pancreatitis. PEL. Nederl. Tijdschr. v. Geneesk., 1913, i, No. 15.

Liposis pancreatica. E. J. MULLALLY. Canad. M. Ass. J., 1913, iii, 382.

Experimental and clinical relations between necrosis pancreas and cholecystitis on the one hand and cholelithiasis on the other. NORDMANN. Deutscher chir. Kong., 1913. [292]

A case of serous cyst of the pancreas. NOVARO. Riv. osp., Roma, 1913, iii, No. 9.

Solitary hydatid cyst of the head of the pancreas. CRAGLIETTO. Clin. chir., Milano, 1913, xxi, No. 4.

The surgical significance of the accessory pancreas. CAWARDINE and SHORT. Ann. Surg., Phila., 1913, lvii, 653. [292]

Banti's disease in infancy; two cases of Banti's disease in earliest infancy. D'ESPINE. Rev. méd. de la Suisse Rom., Genève, 1913, xxxiii, No. 5.

Cysts of the spleen. R. H. FOWLER. Ann. Surg., Phila., 1913, lvii, 658. [292]

Splenectomy. M. A. TATE. Lancet-Clin., 1913, cix, 477.

Death from internal hæmorrhage seven days after an injury of the spleen. H. HAHN. Med. Klin., 1913, ix, 585.

Miscellaneous

The abdomen; an important factor in chronic joint affections. F. E. PECKHAM. Am. J. Orth. Surg., 1913, x, 80.

Diagnosis of the acute abdominal conditions of children. E. M. CORNER and E. CAUTLEY. Practitioner, Lond., 1913, xc, 798. [293]

Suppurative conditions of the upper abdomen. B. F. ZIMMERMAN. Ky. M. J., 1913, xi, 400.

On the question of penetrating abdominal wounds. K. S. SUMURAWKIN. Voenno-med. J., St. Petersburg, 1913, ccxxxvi, 373.

Bullet wound of the abdomen associated with lesions of the rectum, the colon, the mesentery and the omentum; recovery. CORMIO. Policlin., Roma, 1913, xx, No. 17.

The consideration of a few points in visceral ptosis. W. S. NEWCOMET. Penn. M. J., 1913, xvi, 639.

The cause of epigastric pain. G. FARNOLI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 519.

Spontaneous eversion, treated and cured by abdominal gymnastics. WALTHER. Bull. et mém. Soc. de chir. de Par., 1913, xxxix, 747.

Laparo- and thoracoscopy. H. C. JACOBÆUS. Beitr. z. klin. d. Tuberkul., 1913, xxv, 2. [293]

A plea for early laparotomy in abdominal diseases. A. GOLDMAN. Med. Rec., 1913, lxxxiii, 981.

The importance of surgical interventions in the abdominal cavity in children. D. BALÁS. Beitr. z. klin. Chir., 1913, lxxxiv, 61.

SURGERY OF THE EXTREMITIES

Diseases of Bones, Joints, Muscles, Tendons — General Conditions Commonly Found in the Extremities

The chemistry of bone marrow; the fifth communication on "The chemistry of the blood in diseases." H. BEUMER and M. BÜRGER. *Ztschr. f. exp. Path. u. Therap.*, 1913, xiii, 367.

Experimental contributions to the pathogenesis of acute hæmatogenous osteomyelitis. F. L. DUMONT. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 116. [294]

Osteomyelitis in earliest infancy; osteomyelitis of the radius; osteomyelitis of the superior extremity of the femur; the microbic nature of these osteomyelites in earliest infancy; importance of streptococcic infections. E. KIRMISSON. *Bull. méd., Par.*, 1913, xxvii, 243.

Infectious osteomyelitis. KLEMM. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 2.

Localized osteomyelitis of the long bones. C. C. SIMMONS. *Boston M. & S. J.*, 1913, clxviii, 637.

Atrophy of the femoral neck as a secondary symptom of osteomyelitis in early infancy; coxa vera. GASNE. *Rev. d'orthop., Par.*, 1913, iv, No. 3.

Tuberculous osteomyelitis of the digits. R. M. GREEN. *Boston M. & S. J.*, 1913, clxviii, 797.

Tuberculosis of the bones and joints and its homœopathic treatment. A. N. ROGATCHEVSKY. *North Am. J. Homœop.*, 1913, xxviii, 285.

Tuberculin reaction at the focus in tuberculosis of bones and joints. F. DELITALA. *Arch. di ortop., Milano*, 1913, xxx, 12.

The treatment of osteo-articular tuberculosis. GARRÈ. *Arch. f. klin. Chir., Berl.*, 1913, ci, No. 2.

The treatment of osteo-articular tuberculosis in infancy. BARBARIN. *Clinique, Par.*, 1913, viii, No. 19.

Radiographs of diaphyseal tuberculosis of the long bones. BROCA and PHILBERT. *Paris méd.*, 1913, No. 24.

Modern efforts directed toward a conservative treatment of surgical tuberculosis. ROTHSCHILD. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, No. 5.

Light-treatment of surgical tuberculosis. VULPIUS. *München. med. Wchnschr.*, 1913, lx, No. 20.

The treatment of surgical tuberculosis in special sanatoria. VULPIUS. *Med. Klin.*, 1913, ix, No. 19.

Post-typhoid osteo-periostitis. TOURNEUX and GINESTY. *Province méd., Par.*, 1913, xxvi, No. 21.

Osteitis deformans (Paget's disease). W. G. THOMPSON. *Med. Rec.*, 1913, lxxxiii, 832.

Some diagnostic features of certain intra-osseous lesions, astitis fibrosa, bone cyst, and their relation to other intra-osseous lesions. A. H. FREIBERG. *Lancet-Clin.*, 1913, cix, 504.

Diagnosis and treatment of Morton's disease. HORODYNSKI. *Gaz. lék., Warszawa*, 1913, xxxiii, No. 19.

Tumors of bone. S. B. CHILDS. *Colo. Med.*, 1913, x, 159.

A primary asarantinoma of the tibia. B. FISCHER. *Frankf. Ztschr. f. Path.*, 1913, xii, 422.

Osseous plasmomata. K. NECKARSULMER. *Mitt. a. d. Hamburg. Staatskrankenanst.*, 1913, xii, 175.

Köhler's disease of the scaphoid bone in children is not a fracture. KÖHLER. *Arch. f. klin. Chir.*, 1913, ci, No. 2.

A case of acute osseous atrophy. MÜLLER. *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, No. 9.

A radiographic study of traumatism of the carpal bones. CHAPUT and VAILLANT. *Rev. d'orthop., Par.*, 1913, xxiv, 227.

Accommodation in ankyloses of the fingers. THIEM. *Monatschr. f. Unfallheilk. u. Invalid.-Wes.*, 1913, xx, No. 5. A peculiar typical deformity of the styloid process of the ulna. REICHT. *München. med. Wchnschr.*, 1913, lx, No. 21.

A case of arrested development of the femur. PERRIN. *Rev. d'orthop., Par.*, 1913, xxiv, 285.

Etiological studies in osteo-arthritis. L. A. O. GODDU. *Am. J. Orth. Surg.*, 1913, x, 142.

A case of hypertrophic osteo-arthritis of pneumococcus origin in a child four years of age. V. FRAGALE. *Gazz. internaz. di med., chir., Napoli*, 1913, i, 54.

The structure and mechanism of the human joints in health, disease, and injuries. G. G. DAVIS. *Am. J. Orth. Surg.*, 1913, x, 30.

Diseases of joints and bone marrow. L. W. ELY. *Am. J. Surg.*, 1913, xxvii, 179.

Hydrarthrosis. PULAWSKI. *Gaz. lék., Warszawa*, 1913, xxxiii, No. 20.

Tabetic arthropathy of the knee; resection; cure. R. FALCONE. *Riforma méd.*, 1913, xxix, 421.

An X-ray study of gastro-intestinal findings in multiple arthritis. G. R. ELLIOTT. *Am. J. Orth. Surg.*, 1913, x, 56.

Static joint diseases, their etiology and their relation to arthritis deformans. G. PREISER. *Am. J. Orth. Surg.*, 1913, x, 100.

Some considerations on the pathogenesis and treatment of toxic arthritis. P. W. NATHAN. *Am. J. Orth. Surg.*, 1913, x, 69.

Physiotherapy of chronic affections of the joints, with special consideration of thermotherapy. B. BUXBAUM. *Zentralbl. f. d. ges. Therap.*, 1913, xxxi, 225.

Chronic arthritis; therapeutic evidence of the incidence of streptococcal infection. D. W. C. JONES. *Brit. M. J.*, 1913, i, 1047.

The etiology of chronic non-tuberculous arthritis—the mis-called arthritis deformans. L. W. ELY. *Am. J. Orth. Surg.*, 1913, x, 171.

Experimental streptococcal arthritis in rabbits. L. JACKSON. *J. Infect. Dis.*, 1913, xii, No. 3.

Gonorrhœal arthritis. E. J. ANGLE. *Am. J. Clin. Med.*, 1913, xx, 405.

The treatment of gonorrhœal pseudo-rheumatism by the antimeningococcic serum of Dopter. BARBE. *Arch. de méd. et de pharm. nav., Par.*, 1913, No. 4.

Treatment of gonorrhœal arthritis by the antimeningococcic serum. LASSERRE. *J. de méd. de Bordeaux*, 1913, xliii, No. 19.

The serum therapy of meningococcus arthritis. H. L. TAYLOR. *Cleveland M. J.*, 1913, xii, 348.

A contribution to the etiology of rheumatoid arthritis. W. CROWE. *Lancet, Lond.*, 1913, clxxxiv, 1377.

Rheumatism: its etiology and pathology. J. A. OWEN. *Va. M. Semi-Month.*, 1913, xviii, 90.

The diagnosis of the tubercular character of joint disease. E. G. BRACKETT. *Boston M. & S. J.*, 1913, clxviii, 673.

Contribution to the study of juxta-articular tuberculosis of the hip-joint. F. DELITALA. *Bull. d. sc. méd.*, 1913, lxxxiv, 53.

Casuistics of traumatic inflammations of the hip-joint. Z. BRIND. *Monatschr. f. Unfallh. u. Invalidenwes.*, 1913, xx, 111.

Fixation in the treatment of hip disease. E. H. BRADFORD. *Am. J. Orth. Surg.*, 1913, x, 354.

The mechanical treatment of hip disease. G. B. PACKARD. *Am. J. Orth. Surg.*, 1913, x, 329.

Results in hip tuberculosis after mechanical treatment

(without traction and hygiene). H. L. TAYLOR. *Am. J. Orth. Surg.*, 1913, x, 333.

Treatment of various affections of the joints, including tuberculous affections, and cold abscesses by means of camphorated phenol. PUHL. *Zentralbl. f. Chir.*, 1913, xl, No. 21.

Radiographic study of ossification around the knee-joint in the new-born. DELHERM. *Bull. off. soc. franc. d'électrotherap. et de radiol.*, 1913, xxi, 9.

Injuries to the semilunar cartilages of the knee-joint. R. MORISON. *Clin. J.*, 1913, xlii, 1. [295]

Bruise of the right knee; tetanus; open fracture of the right fibula. CAULLI. *Riv. osp.*, Roma, 1913, iii, No. 8.

Penetrating wounds of the knee-joint. MÜLLER. *Arch. f. klin. Chir.*, 1913, ci, No. 2.

Arborescent lipoma of the knee. LEFEVRE and DUBOURG. *Arch. gén. de chir., Par.*, 1913, vii, No. 4.

A case of Volkmann's ischæmic contracture of the hand. G. DE SWIETECHOWSKI. *Lancet, Lond.*, 1913, clxxxiv, 1380.

Congenital familiar contracture of the joints of the little finger. SCHULTZE. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, No. 5.

A consideration of the action of the extrinsic and intrinsic muscles of the foot from an anatomical and mechanical standpoint. L. T. BROWN. *Am. J. Orth. Surg.*, 1913, x, 18.

Tuberculosis of the supraspinatus muscle. J. T. RUGH. *Am. J. Orth. Surg.*, 1913, x, 603.

Muscle abscess due to typhus bacilli occurring in the course of typhoid fever. AYUTA and KURAMOTO. *Saikin-gaku-Zasshi, Tokyo*, 1913, No. 209.

Myositis. JACOB. *München. med. Wchnschr.*, 1913, lx, No. 20.

Multiple myeloma. T. SHENNAN. *Edinb. M. J.*, 1913, x, 414.

The treatment of spastic contractures. A. STOFFEL. *Am. J. Orth. Surg.*, 1913, x, 611.

Contribution on hysterical contractures after accident. H. HARTTUNG. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, 114. [295]

Subcutaneous ruptures of the flexor tendons of the fingers. PFÖRRINGER. *Monatschr. f. Unfallheilk. u. Invalid.-Wes., Leipz.*, 1913, xx, No. 5.

Pathological anatomy of tendinous synovitis with rizziform granules and the mode of formation of the limiting synovial-membrane and the granules. FORGUE and ÉTIENNE. *Rev. de chir., Par.*, 1913, xxxiii, No. 5.

The treatment of phlegmons of the synovial sheaths of the hand after Lecène's method. LEFEVRE. *Province méd., Par.*, 1913, xxvi, 194.

Tearing of the tendon of the quadriceps and of the patellar ligament. JANASZEK. *Wien. klin. Rundschau*, 1913, xxvii, Nos. 20-21.

A case of syphilitic bursitis. CLAUSEN. *Ugesk. f. Laeger, Kjøbenh.*, 1913, lxxv, No. 18.

Infective inflammation of hand. J. J. DIAL. *J. Okla. St. M. Ass.*, 1913, v, 539.

Treatment of felons with reference to the pathological anatomy and location of incisions. G. M. DORRANCE. *J. Am. M. Ass.*, 1913, lx, 1416. [296]

A painful variety of adiposis of the lower limbs, which were affected with sciatica. FAVRE and TOURNADE. *Lyon méd.*, 1913, cxx, No. 19.

Elephantiasis neurofibromatosis of the foot with general neurofibromatosis. F. T. RUGH. *Am. J. Orth. Surg.*, 1913, x, 606.

Fractures and Dislocations

Some unusual fractures. W. H. SPEER. *Dela. St. M. J.*, 1913, iv, 1.

Fracture of the long bones. S. D. VAN METER. *Therap. Gaz.*, 1913, xxxvii, 305.

Röntgen interpretation of a few common type fractures. A. SOILAND. *Western M. News*, 1913, v, 5.

Two cases of rare tabetic bone fractures. SCHLEINZER. *Wien. med. Wchnschr.*, 1913, lxiii, No. 21.

Reduction of fragments under local anaesthesia. DOLLINGER. *Zentralbl. f. Chir.*, 1913, xl, No. 20.

Longitudinal fissured fracture of the lower end of the radius. J. L. BENDELL. *J. Am. M. Ass.*, 1913, lx, 1537.

Treatment of fractures of the radius. TRÖLL. *Arch. f. klin. Chir.*, 1913, ci, No. 2.

Massage and mobilization of fractures of the elbow in infancy. RÖDERER. *Clinique, Par.*, 1913, viii, No. 21.

Diagnosis and treatment of fractures in the region of the elbow-joint. T. VOECKLER. *Med. Klin.*, 1913, ix, 441. [296]

Fractures of the pelvis. JENSEN. *Arch. f. klin. Chir.*, 1913, ci, No. 1.

Fracture of the acetabulum. U. MAES. *New Orleans M. & S. J.*, 1913, lxxv, 825.

Reduction of fractures and luxations of the lower limbs under spinal anaesthesia. ROBINEAU. *Clinique, Par.*, 1913, viii, No. 20.

Fractures of the lower limb treated while permitting the patient to walk about. BAUMBACH. *Cor.-Bl. d. allg. ärzt. Ver. v. Tübing.*, 1913, xlii, 216.

A clinical lecture on fractured femur. C. G. WATSON. *Clin. J.*, 1913, xlii, 97.

Shattering of the femur with extensive compound injury of soft parts; recovery without operation with useful limb. J. Am. M. Ass., 1913, lx, 1343.

Injuries to the condylar cartilages. E. BARREAU. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 688. [297]

Treatment of the spiral fractures of the tibia. G. LEVISON. *Calif. St. J. Med.*, 1913, xi, 188.

Fractures of the calcaneum. BRAND. *Nederl. Tijdschr. v. Geneesk.*, 1913, i, No. 14.

Fractures of the greater tuberosity of the calcaneus. SOUBEYRAN and RIVES. *Arch. gén. de chir.*, 1913, vii, No. 4.

Treatment by extension, of fractures of the calcaneum and of the metatarsus. GELINSKY. *Zentralbl. f. Chir.*, 1913, xl, No. 21.

A lecture on birth palsy: subluxation of the shoulder-joint in infants and young children. H. A. T. FAIRBANK. *Lancet, Lond.*, 1913, clxxxiv, 1217.

A case of complete anterior dislocation of both bones of the fore-arm at the elbow. R. WINSLOW. *Surg., Gynec. & Obst.*, 1913, xvi, 569. [297]

Cases illustrative of (1) fracture of carpal scaphoid with luxation of semilunar, (2) fracture of carpal scaphoid with palpable deformity. P. G. SKILLERN. *J. Am. M. Ass.*, 1913, lx, 1536.

The true luxation of the hand. R. GILLERSON. *Disertation, Strassburg*, 1913.

Traumatic dislocation of the right sacro-iliac synchondrosis in a girl twenty-one months old; cure. BRAQUEHAYE, ADDA and BRUCH. *Arch. de méd. d. enfants, Par.*, 1913, xvi, No. 5.

Luxatio centralis femoris. Z. BRIND. *Arch. f. Orthop., Mechanotherap. u. Unfallchir.*, 1913, xii, 99.

A case of recurrent luxation of the patella. NAGEOTTE-WILBOUCHEWITCH. *Arch. de méd. d. enfants, Par.*, 1913, xvi, No. 5.

Inward subastragalar luxation of the foot. EGIDI. *Riv. osp., Roma*, 1913, iii, No. 8.

Subtalar luxation of the foot. PAUS. *Norsk. mag. f. Lægevidensk.*, 1913, lxxiv, No. 5.

Surgery of the Bones, Joints, etc.

A contribution to the methods of treatment of shortening, in malunited fractures, of an extremity. B. C. PATTERSON. *Am. J. Orth. Surg.*, 1913, x, 649.

The open treatment of recent fractures according to the method of Lambotte. LENORMANT. *Presse méd.*, Par., 1913, xxi, No. 38.

Method of bone-plating. C. E. BLACK. *J. Am. M. Ass.*, 1913, lx, 1698.

Results of experiments on various bone-plates applied to fractured femora in the cadaver. E. L. ELIASON. *Therap. Gaz.*, 1913, xxxvii, 323.

The treatment of fractures of the patella. W. SAKOBIELSKI. *Arch. f. Orthop., Mechanotherap. u. Unfallchir. Wiesb.*, 1913, xii, 266.

Treatment of recent fractures of the patella. BÉRARD. *Bull. méd.*, Par., 1913, xxvii, No. 40.

Plastic surgery for the closing of bone cavities. G. PIERI. *Riv. osp.*, 1913, iii, 342.

Graftings of fat in obliteration of osteomyelitic cavities. ESTOR and ÉTIENNE. *Rev. d'orthop.*, Par., 1913, iv, No. 3.

Treatment of rachitic curvature of the tibia. ROSILADO. *Rev. ibero-amer. de cienc. med.*, 1913, xxix, No. 104.

Successful transplantation of graft without periosteum. H. G. WETHERILL. *J. Am. M. Ass.*, 1913, lx, 1533.

Partial and complete grafts of parts of joints in ulno-radio-humeral resections in animal experiments. N. PUCCI. *Clin. chir.*, Milano, 1913, xxi, 805.

Osteo-articular grafts. RAIMOLDI. *Riv. osp.*, Roma, 1913, iii, No. 8.

Arthroplasty. J. B. MURPHY. *Ann. Surg.*, Phila., 1913, lvii, 593. [297]

Osteoplasty in pseudo-arthritis of the tibia. O. VULPIUS. *Zentralbl. f. chir. u. mechan. Orthop.*, 1913, vii, 127. [299]

Further observations on the use of intra-articular silk ligaments in the paralytic joints of poliomyelitis anterior. B. BARTOW and W. W. PLUMMER. *Am. J. Orth. Surg.*, 1913, x, 499.

Operative treatment of paralyzed feet. MÜLLER. *Zentralbl. f. Chir.*, 1913, xl, No. 21.

Treatment of traumatic flat-foot. A. H. CILLEY. *Am. J. Orth. Surg.*, 1913, x, 221.

Restoring motility after bony ankylosis of the joints. R. T. TAYLOR. *N. Y. M. J.*, 1913, xcvi, 1113. [299]

Transplantation of joints obtained from cadavers. LEXER. *Deutscher chir. Kong.*, 1913. [299]

Mobilization of the ankylosed elbow-joint by free transplantation of periosteum. W. GREIFFENHAGEN. *St. Petersb. med. Ztschr.*, 1913, xxxviii, 93.

Successful arthroplastic surgery of the elbow by means of implantation of an ivory prosthesis. KÖNIG. *München. med. Wchnschr.*, 1913, lx, No. 21.

Replacement of finger and toe phalanges. W. GOEBEL. *München. med. Wchnschr.*, 1913, lx, 356. [300]

Cheilotomy: a function-restoring operation in crippling traumatic arthritis of the hip-joint. W. S. HANDLEY and C. P. BALL. *Brit. M. J.*, 1913, i, 929.

Cheilotomy for crippling traumatic arthritis of the hip-joint. W. I. D. WHEELER. *Brit. M. J.*, 1913, i, 989.

The open reduction of the congenital hip dislocation by an anterior incision. K. LUDLOFF. *Am. J. Orth. Surg.*, 1913, x, 438.

The operative treatment of snapping hip and of traumatic luxation of the ilio-tibial fimbria. WEISZ. *Monatsschr. f. Unfallheilk. u. Invalid.-Wes.*, Leipzig, 1913, xx, No. 5.

The new principle involved in resection of the knee in extensive articular affections. BOGORAS. *Arch. f. klin. Chir.*, 1913, ci, No. 1.

Conservative operative treatment of hammer toe. W. J. MERRILL. *Am. J. Orth. Surg.*, 1913, x, 262.

Supra-condylar osteoplastic amputation of the femur with retention of the supporting power of the stump. R. DALLA VEDOVA. *Riv. osp.*, 1913, iii, 337.

The formation of useful stumps in low amputations of the leg (amputation supramalleolaris) by means of the osteoplastic employment of the malleoli. LEVY. *Zentralbl. f. Chir.*, 1913, ci, No. 18.

Transplantation of tendons. W. B. LA FORCE. *Iowa M. J.*, 1913, xix, 553.

Free transplantation of periosteum: experimental investigations. SCHEPELMANN. *Arch. f. klin. Chir.*, 1913, ci, No. 2.

End results in transplantations from the dead and from a monkey. KÜTTNER. *Deutscher chir. Kong.*, 1913. [300]

The results obtained by implantation of silk tendons in the residual paralysis of poliomyelitis. N. ALLISON. *Am. J. Orth. Surg.*, 1913, x, 519.

A simple operation for the relief of the deformity in certain cases of Volkmann's paralysis. L. W. ELY. *Am. J. Orth. Surg.*, 1913, x, 201.

Primary muscular sarcoma and myomectomy. FASANO. *Policlin.*, Roma, 1913, xx, sez. chir., 86. [300]

ORTHOPEDIC SURGERY

Diseases and Deformities of the Spine

An anatomical explanation of many of the cases of weak or painful backs, as well as many of the leg paralyses. J. E. GOLDTHWAIT. *Am. J. Orth. Surg.*, 1913, x, 309.

Giant bifid spine. CHALIER and SANTY. *Rev. d'orthop.*, Par., 1913, iv, No. 3.

Absence of the cervical spine; report of a case. R. O. MEISENBACH. *Am. J. Orth. Surg.*, 1913, x, 647.

A case of spinal injury. C. W. PERKINS. *North Am. J. Homœop.*, 1913, xxviii, 274.

Traumatic hæmorrhachis. GRÉGOIRE and DESMAREST. *Paris méd.*, 1913, No. 25, May.

Traumatic spondylolisthesis following the fracture of a congenitally deficient fifth lumbar vertebra. A preliminary report. A. H. MACCORDICK and J. A. NUTTER. *Am. J. Orth. Surg.*, 1913, x, 215.

Spondilitic scoliosis. G. VECCHI. *Arch. di ortop.*, Milano, 1913, xxx, 256.

A study of the condition frequently called "sciatic scoliosis." C. H. BUCHOLZ. *Am. J. Orth. Surg.*, 1913, x, 528.

Scoliosis. A corrective jacket applied in sections. E. H. BRADFORD. *Am. J. Orth. Surg.*, 1913, x, 178.

Scoliosis and its treatment. G. BIDOU. *Paris, Maloine*, 1913.

Scoliosis and treatment of scoliosis. E. MAYER. *Med. Klin.*, 1913, ix, 662.

The treatment of scoliosis (fixed type) by plaster, supplemented by pneumatic pressure. J. P. LORD. *Am. J. Orth. Surg.*, 1913, x, 182.

The treatment of structural scoliosis. A. H. FREIBERG. *Am. J. Orth. Surg.*, 1913, x, 5.

How should we treat scoliosis caused by the malforma-

tion of the 5th lumbar vertebra? NAGEOTTE-WILBOUCHEWITCH. *Ann. de med. et chir. infant.*, Par., 1913, xvii, 302.

The old methods of treating scoliosis. RÖDERER. *Clinique*, Par., 1913, viii, No. 18.

Congenital lateral curvature of the spine. K. KANEKO. *Am. J. Orth. Surg.*, 1913, x, 396.

The correction of lateral curvature of the spine. E. G. ABBOTT. *Deutsche med. Wchnschr.*, 1913, xxxix, 892.

Vertebral osteo-arthritis. S. F. JONES. *Am. J. Orth. Surg.*, 1913, x, 363.

Laminectomy in medullary compression; thirteen operations on eleven patients; one case of complete recovery. A. VAN GEHUCHTEN and A. LAMBOTIE. *Nevraxe*, 1913, xiii, 319.

Fracture of the arch of the seventh cervical vertebra by a blow with a fire-arm, associated with a hemorrhagic focus in the spinal cord. MACNINI. *Policlin.*, Roma, 1913, xx, No. 5.

Pseudo-fractures of transverse processes. O. L. RHYS. *Brit. M. J.*, 1913, i, 1103.

Subluxation of the lumbosacral joint as a cause of paraplegia; report of a case; recovery after manipulation. R. R. FITCH. *Am. J. Orth. Surg.*, 1913, x, 587.

Caudal tumors. O. BRUNS. *Fortschr. d. Med.*, 1913, xxxi, 393.

Diagnosis of tumors of the spinal cord. JANCKE. *München. med. Wchnschr.*, 1913, lx, No. 19.

Suffuse subdural lipomatosis of the spinal cord in an infant. S. B. WOLBACH and J. A. P. MILLETT. *Boston M. & S. J.*, 1913, clxviii, 681.

Removal of intrathecal tumor from lumbar region of spinal cord. J. M. CLARKE and C. A. MORTON. *Brit. M. J.*, 1913, i, 932.

Brown-Sequard's traumatic syndrome. LONG and JUMENTIE. *Informat. d. alien. et d. neurol.*, 1913, viii, 100.

A preliminary note from an experimental investigation of concussion of the spinal cord and allied conditions. A. NEWTON. *Brit. M. J.*, 1913, i, 1101.

The present and future of spinal cord surgery. ROTHMANN. *Berl. klin. Wchnschr.*, 1913, l, 528. [301]

Surgery of the spinal cord. RANZI. *Deutscher chir. Kong.*, 1913. [301]

Surgery of the spinal column and the spinal cord. POTEL and VEAUDEAU. *Rev. de chir.*, Par., 1913, xxxiii, No. 5.

Operations on the spinal cord and the nerves for paraplegia, spastic paralysis, and neuralgia, and for the treat-

ment of neuritis and nocturnal enuresis. TIMOFEIFF. *Voenno-med. J.*, St. Petersburg, 1913, cckxxvi, May.

The treatment of tabetic gastric crises by Foersters-Guleck operation. NASTA. *Revista de chir.*, 1913, i, 20. [301]

The operative treatment of lues of the central nervous system. SCHOENBORN. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, No. 5.

The therapeutic value of lumbar puncture. L. LOURIA. *Long Island M. J.*, 1913, vii, 169.

Malformations and Deformities

Congenital malformations caused by amniotic remnants. OMBREDANNE. *Rev. d'orthop.*, Par., 1913, iv, No. 3.

The causation and treatment of deformities following anterior poliomyelitis. B. P. CAMPBELL. *Edinb. M. J.*, 1913, x, 390.

A case of congenital bilateral defect of the radius. A. LORENZ. *Wien. med. Wchnschr.*, 1913, lxiii, 1052.

A case of double congenital coxa valga associated with subluxation on one side. LANCE. *Rev. d'orthop.*, Par., 1913, iv, No. 3.

The pathology and therapy of congenital dislocations of the hip. R. WERNDORFF. *Am. J. Orth. Surg.*, 1913, x, 243.

Deformities of the thigh developing after reduction of congenital luxations of the hip-joint. M. HORVATH. *Beitr. z. klin. Chir.*, 1913, lxxiv, 27.

Treatment of congenital dislocation of the hip. A. S. B. BANKART. *Brit. M. J.*, 1913, i, 1044.

Absence of the bony femoral heads and necks. J. RIDLON and H. B. THOMAS. *Am. J. Orth. Surg.*, 1913, x, 205.

Report of a case of total congenital absence of the femur. J. J. THOMAS. *Cleveland M. J.*, 1913, xii, 321. [302]

Congenital anterior subluxation of the knee. L. MAYER. *Am. J. Orth. Surg.*, 1913, x, 411.

Congenital absence of the fibula. P. LE BRETON. *Am. J. Orth. Surg.*, 1913, x, 408.

Talipes equinus deformity. E. W. HANNOCK. *Am. J. Surg.*, 1913, xxvii, 194. [302]

Flat-foot. K. CRAMER. *Arch. f. Orthop., Mechano-therap. u. Unfallchir.*, 1913, xii, 1.

Spontaneous gangrene and allied conditions in orthopedic surgery. W. G. STERN. *Am. J. Orth. Surg.*, 1913, x, 381.

SURGERY OF THE NERVOUS SYSTEM

A case of facio-hypoglossal anastomosis. E. C. REVERS. *Lancet*, Lond., 1913, clxxxiv, 1450.

Regenerative phenomena in the healing of motor and sensory nerve fibers. J. BOCKE. *Anat. Anz.*, Jena, 1913, xliii, 366.

Acute posterior ganglionitis simulating surgical conditions in the abdomen. L. LITCHFIELD. *J. Am. M. Ass.*, 1913, lx, 1691.

The treatment of tendo- and neurolysis with transplantations of fatty tissue. EDEN. *Deutscher chir. Kong.*, 1913. [301]

A case of paralysis of the external popliteal nerve following nodular erythema. PROCHEZKA. *Čas. lék. česk.*, Prague, 1913, lii, No. 16.

The treatment of neuralgia by injections (intraspinal injections, subcutaneous injections, intraneural injections). RIMBAUD and GRASSET. *Montpellier méd.*, Par., 1913, xxxvi, No. 20.

Neuroma of the ulnar nerve. JABOULAY. *Progrès méd.*, Par., 1913, xli, No. 20.

Malignant neuroma of the ulnar nerve. NOVÉ-JOSSE-RAND, SAVY and MARTIN. *Province méd.*, Par., 1913, xxvi, No. 21.

Traumatic section of the ulnar nerve at the posterior surface of the arm; immediate suture; restoration of function forty-eight hours after the suture; partial persistence of anaesthesia; secondary atrophy of the interosseous muscles and of the hypothenar eminence; integrity of the flexor muscles; functional results satisfactory. MIGINIAC. *Gaz. d. hôp.*, Par., 1913, lxxvi, No. 54.

The indications and results of the excision of posterior spinal nerve roots in men. FOERSTER. *Surg., Gynec. & Obst.*, 1913, xvi, 463. [302]

A case of spastic paralysis treated by Foerster's and Stoffel's operations. BILLMAN. *Ugesk. f. Laeger*, Kjøbenhavn, 1913, lxxv, No. 17.

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

The abuse of the X-rays in the treatment of skin affections. J. T. BOWEN. Boston M. & S. J., 1913, clxviii, 682.

Erysipelas and tattooing. E. SEHRWALD. München. med. Wchnschr., 1913, lx, 976.

Treatment of erysipelas. F. S. ARNOLD. Practitioner, Lond., 1913, xc, 900.

Tuberculosis of the skin. LINSER. Med. Cor.-Bl. d. württemb. ärztl. Ver., Stuttg., 1913, lxxxiii, 313.

Extensive tuberculosis cutis with death from pyæmia; report of a case. H. K. GASKILL. J. Cutan. Dis., 1913, xxxi, 309.

The treatment of lupus. SCHOLTZ. Ztschr. f. ärztl. Fortbild., 1913, x, 193. [303]

Cutaneous gangrene. E. GREGGIO. Gazz. internaz. di med., chir., ig., Napoli, 1913, No. 14, 313.

Current methods of treating furuncles. ROZIES. Progrès méd., Par., 1913, xli, No. 20.

A new method of treating furuncles in the initial stage. HERRILD. Ugesk. f. Laeger, Kjøbenh., 1913, lxxv, No. 19.

The general pathological significance of dermatomycoses. B. BLOCH. Samml. zwangl. Abh. a. d. Geb. d. Dermat., d. Syphilidol. u. d. Krankh. d. Urogenitalapp., 1913, ii, 5.

Primary cutaneous sarcomatosis secondary to a punctured wound of the skin. FAVRE and SAVY. Lyon méd., 1913, cxx, No. 20.

The combined treatment of cutaneous carcinoma by carbon dioxide freezing and Röntgen-rays. J. FABRY. Arch. f. Dermat. u. Syph., Wien, 1913, cxvi, 389.

Treatment of cutaneous epitheliomata by the mixed method (scraping and radiotherapy). BELOT and DU-BOIS-HAVENITH. J. de radiol., Brux., 1913, vii, No. 1.

Pathology and treatment of hæmangioma cavernosum. M. M. PATTON. Northwest Med., 1913, v, 119.

In how far are newly ruptured varicose ulcers to be considered as an immediate consequence of an accident? FRANCK. Monatschr. f. Unfallheilk. u. Invalid.-Wes., Leipz., 1913, xx, No. 4.

Varicose ulcers and heated air. ROZIER. Sud méd., Marseilles, 1913, xlii, No. 1960.

Treatment of varicose ulcers by the modified Moreschi method. CHARRIER and BARDON. J. de méd. de Bordeaux, 1913, xliii, No. 18.

Basic fuchsin in chronic leg ulcer; a preliminary report. E. S. MAY and M. L. HEIDINGSFELD. J. Am. M. Ass., 1913, lx, 1680.

The technique of transplantation of fasciæ. GULEKE. Zentralbl. f. Chir., 1913, xl, 683.

The transplantation of rib cartilage into pedunculated skin flaps. J. S. DAVIS. Urol. & Cutan. Rev., 1913, xvii, 233.

Skin-grafting without dressings. JOS. WIENER. J. Am. M. Ass., 1913, lx, 1526. [303]

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

Fundamental problems of the theory of tumors. B. FISCHER. Frankf. Ztschr. f. Pathol., 1913, xii, 367.

Summary of investigations in tumor growth. L. LOEB. Interst. M. J., 1913, xx, 398.

Recent investigations on tumors. M. LISSAUER. Med. Klin., 1913, ix, 420. [304]

Hereditary predisposition to tumor formation. B. MORPURGO and A. DONATI. München. med. Wchnschr., 1913, lx, 626.

The artificial culture of human tumors. ALBRECHT and LOANOVICS. Wien. klin. Wchnschr., 1913, xxvi, No. 20.

The nomenclature of tumors. VON HANSEMAN. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.

Malignant tumors of the African natives. LEGRAIN. Rev. suisse de méd., 1913, No. 15.

Paraffin tumors. A. N. SARAP. Voienno-med. J., St. Petersb., 1913, ccxxvii, 568.

The line of advance at present open in connection with cancer. J. M. WAINWRIGHT. Internat. J. Surg., 1913, xxvi, 152.

Newer ideas concerning the problem of cancer etiology. L. D. BRISTOL. Med. Rec., 1913, lxxxiii, 787. [304]

Comparative studies upon cancer cells and normal cells. II. The character of growth in vitro with special reference to cell division. R. A. LAMBERT. J. Exp. M., 1913, xvii, 499. [305]

Current methods of diagnosis of cancer. DUKER. Nederl. Tijdschr. v. Geneesk., 1913, i, No. 9.

Experimental production of a cancer and its lessons. C. FIRKET. Scalpel et Liege med., 1913, lxxv, 705.

The prevention and cure of cancer. P. SYMS. Med. Rec., 1913, lxxxiii, 881.

The vitality and development of transplanted cancerous tissue and the biochemistry of the cancerous area. SPINELLI. Arch. ital. di ginec., Napoli, 1913, xvi, No. 4.

Disappearance of secondary carcinoma without extirpation. H. LILIENTHAL. Internat. J. Surg., 1913, xxvi, 156.

The forms of carcinoma prevalent in Norway. SOEGAARD. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.

Cancer mortality in Prussia during the years 1903-11, classified according to age. R. BEHLA. Berl. klin. Wchnschr., 1913, l, 882.

Cancer as a surgical problem. J. W. KENNEDY. Med. Council, 1913, xviii, 212.

The surgical treatment of cancer. W. S. BAINBRIDGE. Internat. J. Surg., 1913, xxvi, 143.

On the treatment of epithelioma. A. RAVOGLI. Am. J. Surg., 1913, xxvii, 173.

Dyspeptic coma and cancerous coma. CADE and ROUBIER. Arch. d. mal. de l'appar. digest. et de la nutrition, Par., 1913, vii, No. 4.

Multiple brown tumors in osteomalacia. MOLINEUS. Arch. f. klin. Chir., Berl., 1913, ci, No. 2.

Myeloma. SISOEFF. Chir. arch. Veliaminova, St. Petersb., 1913, xxix, No. 2.

Researches on sarcosporidia. I. A morphological study. A. ALEXEIEFF. Arch. d. zool. exp. et gén., Par., 1913, li, 521.

Mycetoma in America. R. L. SUTTON. J. Am. M. Ass., 1913, lx, 1339. [305]

Benign melanosis; a supplementary report. J. C. STEWART. J. Am. M. Ass., 1913, lx, 1358.

The control of rabies. H. ALBERT. Am. J. M. Sc., 1913, cxlv, 697.

Reclus' lignous phlegmon. NAKAMURA. Jundendo Ijikenku Kwai Hoko, Tokyo, 1913, No. 482.

The identity of cause of aseptic wound fever and so-

called post-operative hyperthyroidism, and their prevention. G. W. CRILE. *Ann. Surg., Phila.*, 1913, lvii, 648. [305]

Right-of-way vs. hospital treatment of surgical shock. O. F. SCOTT. *Chicago M. Recorder*, 1913, xxxv, 257.

Anthrax. SCHULTZE. *Ärzt. Sachverst.-Ztg.*, 1913, xix, 211.

Tetanus. Three cases with recovery. E. C. HENRY. *Med. Council*, 1913, xviii, 166.

Post-operative cases of death in abnormal narrowing of the aorta. FRÜHWALD. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 19.

Pre-operative determination of the powers of resistance of the patients. DE GRAEUWE. *J. de chir.*, 1913, x, 433.

Complications following surgical operations. E. H. BECKMAN. *Ann. Surg., Phila.*, 1913, lvii, 718.

A peculiar action of foreign bodies. SULTAN. *München. med. Wchnschr.*, 1913, lx, No. 19.

Sera, Vaccines and Ferments

The complement fixation test in the diagnosis of gonorrhoea. R. G. OWEN and H. SNURE. *J. Mich. St. M. Soc.*, 1913, xii, 247.

Serodiagnosis of tumors by the deviation of the complement. J. HALPERN. *München. med. Wchnschr.*, 1913, lx, 914.

Abderhalden's serum test for carcinoma. EPSTEIN. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 17.

Serodiagnosis of carcinoma. ROSENBERG. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 20.

Clinical value of tuberculin in diagnosis and treatment. W. J. DUREL. *Southern M. J.*, 1913, vi, 303.

The use of tuberculin in diagnosis and treatment. J. F. H. DALLY. *Lancet, Lond.*, 1913, clxxxiv, 1228.

Plea for uniform method of treatment with tuberculin. J. H. THOMSON. *Brit. M. J.*, 1913, i, 926.

The present evidence for and against the use of tuberculin as a specific cure. H. B. SHAW. *Brit. M. J.*, 1913, i, 921.

The treatment of infantile tuberculosis by Rosenbach's tuberculin. C. BECK. *Ztschr. f. Kinderh.*, 1913, vi, 439.

Hypersensitiveness to tuberculo-protein and to tuberculin. C. R. AUSTRIAN. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 141. [306]

Treatment of erysipelas with antimeningococcus serum. WELZ. *Therap. Monatsh.*, 1913, xxvii, 273.

A method for standardizing bacterial vaccines. J. G. HOPKINS. *J. Am. M. Ass.*, 1913, lx, 1615.

An attempt to interpret present-day uses of vaccines. T. SMITH. *J. Am. M. Ass.*, 1913, lx, 1591.

Clinical observation on the effect of gonococci vaccine in chronic gonorrhoeal arthritides. SEMENEW. *Ztschr. f. Urol., Berl.*, 1913, vii, No. 5.

Gonargin, a new vaccine preparation. J. SCHUMACHER. *Dermat. Ztschr., Berl.*, 1913, xx, 400.

Vaccinotherapy in bacteraemia. SORMANI. *Nederl. Tijdschr. v. Geneesk.*, 1913, i, No. 15.

A note on the use of vaccines in the treatment of rheumatoid arthritis. A. B. SOLTAU. *Lancet, Lond.*, 1913, clxxxiv, 1379.

Is specificity of anaphylaxis reaction dependent on chemical constitution of proteins or on their biologic relations? H. G. WELLS and T. B. OSBORNE. *J. Infect. Dis.*, 1913, xii, No. 3.

Blood

The relations of the thymus and ovary to the blood picture. HEIMANN. *Deutsche Gesellsch. f. Gynäk., Halle*, 1913, May. [306]

The laws of the activity of the leucocytes in inflammatory processes. M. LÖHLEIN. *Fischer: Jena*, 1913.

Investigation on analysis of the blood in struma and the effect of thyroidectomy on the constitution of the blood. E. NAGELSBACH. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 489.

A case of very severe melæna of the new-born, cured by injection of defibrinated human blood. MERCKENS. *München. med. Wchnschr.*, 1913, lx, No. 18.

Some details of the venous circulation. E. SCHULTZE. *Med. Fortnightly*, 1913, xliii, 169.

The occurrence of tubercle bacilli in the blood. BACMESITER. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, No. 5.

The value of polymorph neutrophile leucocytes in disease; with special reference to vaccine treatment in tuberculosis. E. H. BLACK. *J. Clin. Research*, 1913, vi, 39.

Two cases of traumatic leucæmia. FACCHINI. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, No. 60.

Hæmolytic icterus. ANTONELLI. *Policlin., Roma*, 1913, xx, No. 5.

A method of controlling rectal hæmorrhages. B. L. MYERS. *J. Am. M. Ass.*, 1913, lx, 1619.

Control of internal hæmorrhages by means of intravenous injection of grape sugar. SCHREIBER. *Therap. d. Gegenw.*, Berl., 1913, liv, No. 3.

Successful treatment of hæmophilic hæmorrhages by means of thermocauterization. PARREIDT. *München. med. Wchnschr.*, 1913, lx, No. 21.

Hæmorrhagic conditions of children. SORESI. *Arch. Pediat.*, 1913, xxx, 252. [306]

Blood coagulation; physico-chemical processes and their relation to the action of thrombin. M. LANDSBERG. *Biochem. Ztschr.*, 1913, l, 245.

Technique and results of my method of determining the lapse of time in blood coagulation. W. SCHULTZ. *München. med. Wchnschr.*, 1913, lx, 4.

Remedial agents which specifically check coagulation and decrease the blood pressure in the female genitalia. L. POPIELSKI. *Biochem. Ztschr.*, 1913, xlix, 168. [307]

Thrombophlebitis of the external iliac vein. M. LEALE. *J. Am. M. Ass.*, 1913, lx, 1523. [307]

Thrombosis of the portal vein following the effect of blunt force to the abdomen. ENDERLEN. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 726. [307]

Traumatic thrombosis of the veins of the upper arm. BAUM. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 21.

Thrombosis and embolisms after gynecological operations. T. VON WENZEL. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 37.

A case of embolism of the abdominal aorta. SCHIRMAN. *Pract. Vrach*, 1913, xii, 244.

Air embolism. W. F. RICE. *Hosp. Bull. Univ. Md.*, 1913, ix, 47.

Relation of gas embolism to production of artificial pneumothorax. S. T. HARRIS. *Southern M. J.*, 1913, vi, 309.

Embolism by adipose tissue in the large blood circuit and its cause. C. FROMBERG and F. NAVILLE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 23.

Direct transfusion for hæmorrhagic purpura. W. L. DUFFIELD. *Long Island M. J.*, 1913, vii, 188.

A case of direct transfusion of blood by end-to-end suture of the radial artery to the basilic vein. A. JACOMET. *Bull. méd., Par.*, 1913, xxvii, 435.

Experimental, agglutinative, and hæmolytic transfusions. OTTENBERG, KALISKI and FRIEDMAN. *J. Med. Research*, 1913, xxviii, 141. [307]

Blood and Lymph Vessels

The relation of vascular conditions to pituitrin diuresis. R. G. HOSKINS and J. W. MEANS. *J. Pharmacol. & Exp. Therapeut.*, 1913, iv, 435.

Cirroid aneurism of the hand. M. BALLIN. J. Mich. St. M. Soc., 1913, xii, 265. [308]

A case of abdominal aneurism with unusual features, operated on by means of Colt's apparatus. J. R. COLLINS and C. BRAINE-HARTNELL. Brit. M. J., 1913, i, 987.

Tuberculosis of the large arteries; with the report of a case of tuberculous aneurism of the right iliac artery. S. R. HAYTHORN. J. Am. M. Ass., 1913, lx, 1413. [308]

Primary tumors of the vascular sheaths. FERRARINI. Clin. chir., 1913, xxi, 589. [308]

Cold gangrene due to vascular paralysis. WIETING. Zentralbl. f. Chir., 1913, xl, 593. [309]

Pneumococcic phlebitis and precocious phlebitis of tuberculous patients. LAFFORGUE. Progrès méd., Par., 1913, xli, No. 18.

The present status of vascular surgery. DUMONT. Cor.-Bl. f. Schweiz. Ärzte, 1913, xliii, No. 20.

Circular suture of the vessels. M. HIRSCH. Wien. med. Wchnschr., 1913, lxiii, 1233.

Repair of the abdominal aorta by the carotid artery of the same animal. JEGER and JOSEPH. Arch. f. klin. Chir., 1913, ci, No. 2.

The operative treatment of varicose veins of the lower limbs. ORLOFF. Voenno-med. J., St. Petersburg, 1913, ccxxvi, Mar.

Experimental ligation of the portal vein; its application to the treatment of suppurative pyelphlebitis. H. NEUHOF. Surg., Gynec. & Obst., 1913, xvi, 481. [309]

Investigations on the transplantation of blood vessels. CASTIGLIONI. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvi, 63.

Researches on the transplantation of veins into the ureter. CUTURI. Riforma méd., 1913, xxix, No. 17.

Intravenous injections. FRIEDMANN. München. med. Wchnschr., 1913, lx, No. 19.

The etiology and preventive inoculation of elephantiasis. JOSHINAGA. Ken-Yo-Kai-Zasshi, 1913, No. 109. [309]

Intradermic lymphangiectases in the inguinocrural region. JACOB. Bull. et mém. Soc. de chir. de Par., 1913, xxxix, 606.

Endothelioma of lymph nodes. J. EWING. J. Med. Research, 1913, xxviii, 11. [310]

A further contribution on the question of permanent subcutaneous drainage in dropsy. W. PERIMOFF. Kazan. med. Ztschr., 1913, xiii, 59.

Poisons

A method of counting bacteria in water. Remarks upon the bearing of the method upon the subject of "Saline Fever" by Paul Fildes. R. DONALD and P. FILDES. Lancet, Lond., 1913, clxxxiv, 1447.

Re-infection. LÖHE. Berl. klin. Wchnschr., 1913, l, No. 20.

A case of acute septicæmia due to the B. pyocyaneus. M. CLARKE. Med. Press & Circ., 1913, cxlvi, 492.

A bacillus of an unusual kind isolated from a case of septicæmia. J. A. B. HICKS. Lancet, Lond., 1913, clxxxix, 1526.

Tetanus bacilli and tetanus toxin. H. E. BEESER. Folia microbiol., 1913, ii, 66.

Is the tetanus bacillus gram-positive? H. EYMER. Zentralbl. f. Bakteriologie, 1913, lxix, 1.

The micrococcus tetragenous as a cause of bacteriæmia in the human. STROBEL. Beitr. z. klin. Chir., 1913, lxxxiii, 718. [310]

Treatment of acute surgical infections with rhythmical hyperæmia. THIES. Deutscher chir. Kong., 1913. [311]

Surgical Therapeutics

Further reports on KJ. (1) Its action on cancerous tumors; (2) as a cure for these in combination with subcutaneous injections of 0.5 per cent natrium arsenicum in 0.25 per cent carbolic solution. MICHALOW. Russk. Vrach, St. Petersburg, 1913, xii, 423.

The treatment of septic processes by the administration of alkalies. VORSCHÜTZ. Deutscher chir. Kong., 1913. [311]

On the value of peristaltin in the after-treatment of laparotomy patients. VON BRUNN. Zentralbl. f. Chir., 1913, xl, 431. [311]

A case of tetanus treated with intraspinal injections of magnesium sulphate. H. L. TIDY. Brit. M. J., 1913, i, 1104.

The influence of morphine, opium and pantopon on the movements of the gastro-intestinal tract in man and in animals. N. SCHAPIRO. Arch. f. d. ges. Physiol., 1913, cli, 65.

The iodine treatment and dechloruration. F. SARVONAT and R. CRÉMIEU. Province méd., Par., 1913, xxvi, 184.

A new powder for wounds. F. HAMMER. München. med. Wchnschr., 1913, lx, 1150.

Styptics, with special consideration of erystipticum "Roche." A. GISEL. Deutsche med. Wchnschr., 1913, xxxix, 1046.

Noviform, a new substitute for iodoform in surgery. FRICHBERG. Novoié v med., St. Petersburg, 1913, vii, No. 7.

Treatment of wounds with sugar. G. MAGNUS. München. med. Wchnschr., 1913, lx, 406. [311]

Therapeutic experiments with local thorium chloride treatment in carcinomatous mice and sarcomatous rats. CAAN. München. med. Wchnschr., 1913, lx, No. 20.

Balsam of Peru: a historical note. J. KNOTT. Med. Press & Circ., 1913, cxlvi, 521.

Treatment of cancer by sulphate of quinide. CASTAGNE. Ann. de chir. et d'orthop., Par., 1913, xxvi, 80.

Treatment of superficial new growths by pure radium bromide. F. H. WILLIAMS and S. W. ELLSWORTH. J. Am. M. Ass., 1913, lx, 1694.

The results obtained with the employment of fibrolysin in cicatrization. G. WERDNIGG. Klin.-therap. Wchnschr., 1913, xx, 607.

The effect of collargol clysters in septic processes. WOLF. Deutsche med. Wchnschr., 1913, xxxix, No. 20.

The diuretic action of extracts of the hypophysis. L. LUCATELLO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 393.

Report on the use of pituitary extract in surgical shock. C. A. HILL. Boston M. & S. J., 1913, clxviii, 720. [311]

Surgical Anatomy

The skeleton of a pseudo-hermaphrodite. W. WALDEYER. Sitzungsber. d. k.-preusz. Akad. d. Wiss., Berl. 1913, xx, 368.

Some observations on the anatomy of the inguinal region, with special reference to absence of the conjoined tendon. W. HESSERT. Surg., Gynec. & Obst., 1913, xvi, 565. [312]

Electrology

What the X-ray should mean to the physician. G. D. BOND. Tex. St. J. Med., 1913, ix, 19.

X-ray diagnosis of post-operative affections. BUSSE. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.

Clinical factors in X-ray work. A. W. CRANE. J. Mich. St. M. Soc., 1913, xii, 263.

Researches on the action of Röntgen rays on living tissues and their therapeutic applications. HURTADO. *Rev. ibero-amer. de cienc. med.*, Madrid, 1913, xxix, No. 104.

Histological changes produced in the tissues by the action of rays. WICKHAM. *Arch. d'électr. méd., exp. et clin.*, Bordeaux, 1913, xxi, No. 358.

Progress in the field of röntgenotherapy during the last year. H. E. SCHMIDT. *Berl. klin. Wchnschr.*, 1913, l, 927.

A new device in X-ray tubes rendering the diaphragm unnecessary. S. TOUSEY. *Arch. Röntg. Ray*, 1913, No. 154, 473.

The present status of röntgenotherapy. N. DOHAN. *Wien. med. Wchnschr.*, 1913, lxiii, 935.

Critical contributions on the study of deep röntgenotherapy. KRAUSE. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 2.

A case of tardy injurious effects of deep röntgenotherapy. DIETERICH. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 2.

Experiments with hard Röntgen rays. F. M. GRÖDEL. *München. med. Wchnschr.*, 1913, lx, 1090.

Experiments with hard Röntgen rays, and special considerations on deep radiology. F. DESSAUER. *München. med. Wchnschr.*, 1913, lx, 696.

A handbook on instantaneous photography in röntgenotherapy. J. SCHWENTER. Leipzig, 1913.

Radiotherapy for tumors. WERNER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 601.

Radiotherapy of malignant tumors. R. JEDLICKA. *Ann. d'électrobiol. et de radiol.*, 1913, xvi, 263.

Treatment of deep-seated cancer by X-rays excited by a current of unfluctuating voltage. S. TOUSEY. *Internat. J. Surg.*, 1913, xxvi, 169.

The biochemical action of rays, with special consideration of the Röntgen rays. BORDIER. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 2.

The radiographic diagnosis of syphilis, tuberculosis tumors and osteomyelitis of the long bones. W. M. BRICKNER. *Am. J. Surg.*, 1913, xxvii, 165.

The radioactive substances of the thorium series in therapeutics. LEDOUXLEBARD. *Arch. d'électr. méd., exp. et clin.*, Bordeaux, 1913, xxi, No. 358.

The new radium and thorium therapy. F. H. BLACKMAR. *Med. Times*, 1913, xli, 135.

Radium emanation therapy. W. ENGELMANN. *Lancet*, Lond., 1913, clxxxiv, 1225.

Radium in dermatology. W. H. B. AIKENS and F. C. HARRISON. *Canad. Pract. & Rev.*, 1913, xxxviii, 255.

The employment of radium in surgery. A. STICKER. *Arch. f. physikal. Med. u. med. Techn.*, 1913, vii, 182. [312]

Treatment by radium in post-operative relapse of sarcoma. HARET. *J. de radiol.*, Brux., 1913, vii, No. 1.

The use of radiography in surgical affections of the stomach and intestines. BÉCLÈRE and MÉRIEL. 25th Cong. d. l'Ass. Fran. d. Chir., 1912, Oct. [312]

The bactericid action of ultra-violet light in clear, turbid and colored water. M. OLER-BLOM. *Ztschr. f. Hyg. u. Infektionskrankh.*, 1913, lxxiv, 197.

Heliotherapy. E. ESTOR. *Ann. de méd. et chir. infant.*, Par., 1913, xvii, 289.

Chromoendophotography. ILGNER. *Deutsche Ges. f. Gynäk.*, Halle, 1913.

The aërothermic treatment; personal statistics. COLOMB. *Marseille méd.*, 1913, l, No. 10.

Military and Naval Surgery

Military surgery. G. M. BLECH. *Am. J. Surg.*, 1913, xxvii, 184.

Experiences in military surgery. P. CLAIRMONT. *Wien. klin. Wchnschr.*, 1913, xxvi, 613.

The action of bullets. TILE. *Chir. arch. Veliaminova*, St. Petersburg, 1913, xxix, No. 2.

Gun-shot injuries of blood vessels. LOTSCH. *Deutsche chir. Kong.*, 1913. [313]

Gun-shot injuries in civil practice. N. A. POWELL. *Canad. J. M. & S.*, 1913, xxxiii, 324.

Wounds by modern fire-arms. PHOCAS. *Bull. et mém. Soc. de chir. de Par.*, 1913, xxxix, 614.

Air contusions caused by passing projectiles; based on experiences of the war of 1904-1905. G. E. SCHUMKOW. *Volenno-med. J.*, St. Petersburg, 1913, ccxxxvi, 192.

Experiences with the mastisol dressing in the Serbo-Turkish war. STIERLIN and VISCHER. *Cor.-Bl. f. Schweiz. Ärzte*, 1913, xliii, No. 19.

GYNECOLOGY

Uterus

Investigations of the endometrium; the histologic changes incident to benign affections of the endometrium corporis. S. KJÆGAARD. *Kjøbenh.*, 1913. [314]

The cells of the myometrium which take up the carmine in physiological injections. P. BOUIN and P. ANCEL. *Compt. rend. hebdom. Soc. de biol.*, Par., 1913, lxxiv, 728.

The blood vessels of the uterus during the menopause. SUDAKOFF. *J. akush. i. jensk. boliez.*, St. Petersburg, 1913, xxviii, 589. [314]

A voluminous calculus which enclosed the uterus and simulated a neoplasm. ROMEO. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 536.

Cancer of the uterus. R. M. RAWLS. *Med. Rec.*, 1913, lxxiii, 892. [315]

Clinical study of uterine cancers observed in the gynecological consulting room of the inclusion. LIZCANIO. *Siglo med.*, Madrid, 1913, lx, No. 3101.

Statistical contribution on uterine carcinoma. OBATA. *Arch. f. Gynäk.*, 1913, xcix, No. 3.

Some observations on carcinoma of the uterus. S. W. BANDLER. *Internat. J. Surg.*, 1913, xxvi, 159.

Operative indications in cancer of the uterus. J. L. FAURE. *Arch. mens. d'obst. et de gynec.*, 1913, ii, 324.

The present status of the radical abdominal operation for cancer of the uterus. R. PETERSON. *Surg., Gynec. & Obst.*, 1913, xvi, 561. [315]

Non-surgical treatment of cancer. A. THEILHABER. *Berl. klin. Wchnschr.*, 1913, l, 348. [315]

X-ray treatment in carcinoma of the uterus, of the mammary gland, and of the ovaries. G. KLEIN. *München med. Wchnschr.*, 1913, lx, 905.

Diffuse adenomyomatosis of uterus and rectum. E. FORGUE and G. MASSABEAU. *Paris méd.*, 1913, ii, No. 22.

Data furnished by the cystoscopic exploration in cancer of the cervix. HARTMANN. Paris méd., 1913, ii, No. 22.

Marked influence of mesothorium raying on a cervical cancer. S. MEIDNER. Therap. d. Gegenwart, 1913, liv, 149. [316]

The cautery in the radical treatment of cancer of the cervix. WERDER. Surg., Gynec. & Obst., 1913, xvi, 579. [316]

Benign invasion of the uterus and oviducts by chorio-epithelial elements. F. DAELS. Bull. Acad. roy. de méd. de Belg., Brux., 1913, xxvii, 198.

Myomatous uterus associated with bilateral inflammation of the adnexa and left pyovarium. WEINBRENNER. München. med. Wchnschr., 1913, lx, 1232.

Röntgenotherapy in myomata and fibrosis of the uterus. HIRSCH. München. med. Wchnschr., 1913, lx, No. 17.

Fibromyoma uteri. W. P. HEALY. N. Y. M. J., 1913, xxviii, 922.

Röntgenotherapy of uterine fibromyomata. CALATAYUD. J. de radiol., Brux., 1913, vii, No. 1, and Rev. espan. de electr. y radiol. méd., Valencia, 1913, ii, No. 14.

Organotherapy for menstrual troubles and uterine fibromyomata. WIJN. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 12.

Etiology and treatment of uterine hæmorrhages. L. HIRSCH. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 420. [317]

Sclerosis of the uterus (arteriosclerosis uteri) and its relation to uterine hæmorrhages. BUKOJEMSKY. Arch. f. Gynäk., Berl., 1913, xcix, No. 3.

Treatment of metritis by high-frequency current electric curettement. P. COTTENOT. Bull. off. Soc. franç. d'électrothérap. et de radiol., 1913.

The treatment of dysmenorrhœa. M. GOLDSCHMIDT. Fortschr. d. Med., Berl., 1913, xxxi, 546.

The treatment of pseudo-membranous dysmenorrhœa. A. F. PLICQUE. Bull. méd., Par., 1913, xxvii, 416.

Treatment of amenorrhœa. FRIES. Deutsche med. Wchnschr., 1913, xxxix, 675. [317]

Practical application of electricity as a therapeutic agent. Amenorrhœa, dysmenorrhœa, and hæmatocele. J. R. ETTER. Med. Summary, 1913, xxxv, 69.

Uterine hæmorrhage and its treatment. F. A. HARPER, Med. Council, 1913, xviii, 173.

Medicinal treatment of uterine hæmorrhages. G. KATZ. Med. Klin., 1913, ix, 670.

Uterine hæmorrhages and the electric treatment. MARTIN. Sud méd., Marseille, 1913, xlvii, No. 1960.

X-ray therapy in uterine hæmorrhage. A. FOGES. Wien. med. Wchnschr., 1913, lxiii, 995. [317]

The treatment of uterine hæmorrhage by means of the Röntgen rays. G. E. PFAHLER. Am. J. Obst., N. Y., 1913, lxvii, 860. [317]

X-ray therapy or vaporization in the treatment of hæmorrhagic metropathys. FUCHS. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxvii, 496. [318]

Surgical treatment of uterine hæmorrhage from the non-pregnant uterus. W. KRUSEN. Am. J. Obst., N. Y., 1913, lxvii, 885.

The operative treatment of cervical dropsy. VENGLOVSKY. Chir. arch. Veliaminova, St. Petersburg., 1913, xxix, No. 2.

Congenital ante flexion of the uterus. POTHERAT. Bull. méd., Par., 1913, xxvii, No. 35.

End results of my operation for retroflexion of the uterus. EWALD. Wien. med. Wchnschr., 1913, lxiii, No. 21.

The disadvantages of ventrofixation. ALLMANN. Zentralbl. f. Gynäk., 1913, xxxvii, 649.

Myohysteropexy. JACOBOWICI. Revista de chir., 1913, i, No. 1.

A perforation of the fundus uteri. KÜSTNER. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [318]

Perforation of the uterus resulting from criminal abortion. ASCH. Monatschr. f. Geburtsh. u. Gynäk., Berl., 1913, xxxvii, 701.

A rare case of uterine traumatism. MALY. Zentralbl. f. Gynäk., 1913, xxxvii, No. 2.

Removal of danger of peritonitis by the operative treatment of ruptured uterus. SIGWART. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [318]

Abdominal hysterectomy by anterior ablation in cases of bilateral pyosalpinx. H. BARNSBY. Tours méd., 1913, ix, 45.

Adnexal and Periuterine Conditions

Ovarian secretion; a review. A. L. MCILROY. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 265.

Conservation of ovarian tissue and its power of compensation. D. F. LEE. Indianapolis M. J., 1913, xvi, 180.

Study of the ovum of the guinea-pig in the first stages of embryogenesis. H. LAMS. Arch. de biol., Gand, 1913, xxviii, 229.

Development of the ovum in Podura aquatica. L. DE WINTER. Arch. de biol., Gand, 1913, xxviii, 197.

The ovarian function in Basedow's disease. O. FRANKL. Deutsche Gesellsch. f. Gynäk., Halle, 1913. [318]

Ovarian dyspepsia. H. G. WEBB. Practitioner, Lond., 1913, xc, 897.

Anatomical study of four ovarian grafts in woman. TUFFIER and VIGNES. Bull. et mém. Soc. anat. de Par., 1913, lxxxviii, 148.

The autoplasmic ovarian graft and its clinical value. B. WHITEHOUSE. Clin. J., 1913, xlii, 107. [319]

The conditions of sterilization of the ovary by X-ray. REGAUD and LACASSAQUE. Compt. rend. hebdom. de la Soc. de Biologie, 1913, lxxiv, 783. [319]

The clinical significance of points of follicular ruptures in the ovary. COHN. Arch. f. Gynäk., 1913, xcix, No. 3.

A case of post-partum pyovarium. OHMAN. Finsk. läkar-sällsk. handl., Helsingfors, 1913, lv, April.

A note on typhoid infection of ovarian cysts. J. BLAND-SUTTON. Universal M. Rec., 1913, iii, 385. [319]

Ovarian cyst with twisted pedicle. O. B. WIGHT. Northwest Med., 1913, v, 140. [319]

Dermoid cyst of the right ovary containing teeth, demonstrated by radiography and simulating a stone in the right ureter. GOSSET. Bull. et mém. Soc. chir. de Par., 1913, xxxix, 707.

Tubo-ovarian cysts. E. TÉDENAT and A. RIVES. Province méd., Par., 1913, xxvi, 203.

The disadvantages of conservative operations for ovarian cyst. SILHOL. Arch. mens. d'obst. et de gynéc., Par., 1913, ii, No. 4.

A case of malignant multilocular cyst of the ovary in a young girl. D. M. COWIE. Physician & Surg., 1913, xxxv, 200. [320]

Primary cancer of the ovary. MASSABUAU and ÉTIENNE. Rev. de gynéc. et de chir. abdom., Par., 1913, xx, No. 3.

Case of adeno-carcinoma of the right ovary, developing later in the left; operations; recovery. W. P. CARR. Va. M. Semi-Month., 1913, xviii, 91.

Pathology and therapy of inflammatory diseases of the uterine adnexa. FALGOWSKI. Gaz. lék., Warszawa, 1913, xxxiii, No. 18 and Gynäk. Rundschau, 1913, vii, No. 0.

Primary malignant neoplasm of the fallopian tube. F. B. GURD. Canad. M. Ass. J., 1913, iii, 389. [320]

Hæmatocele of the broad ligament caused by rupture of a tubal pregnancy. H. PAUCOT. Rev. prat. d'obst. et de pædiat., Par., 1913, xxvi, 76.

A case of extra-peritoneal adenomyoma and two cases of intra-peritoneal myomata of the round ligament, with

notes on the origin of epithelial inclusions. WEISHAUP. Arch. f. Gynäk., Berl., 1913, xcix, No. 3.

An operation for ventrosuspension by the round ligaments. H. NEUHOF. J. Am. M. Ass., 1913, lx, 1701.

A clinical lecture on pelvic cellulitis. J. B. HELLIER. Clin. J., 1913, xlii, 81.

External Genitalia

Glass ball in vagina for fifteen years. G. S. VON WEDELSTAEDT. South. Cal. Practitioner, 1913, xxviii, 172.

Vaginismus. FÖNNUS. Nord. med. Ark., Stockholm, 1913, xlv, May.

Hæmatoma of the vagina and of the external genitalia. OUNGER-BRIANZEFF. Russk. Vrach, St. Petersburg., 1913, xii, No. 14.

Thrombus and vulvo-vaginal hæmatoma. CAUWENBERGHE. Bull. Soc. belge de gynéc. et d'obst., 1913, xxxiii, 167. [320]

The origin of the micro-organisms in emphysematous colpitis. ALCHEL. Zentralbl. f. Gynäk., 1913, xxxvii, No. 19.

Vaginal carcinoma. J. FEUCHTWANGER. München. med. Wchnschr., 1913, lx, 1062.

Two cases of primary epithelioma of the vagina. TOURNEUX and GINESTY. Toulouse méd., 1913, xv, No. 8.

The utilization of the small intestine in the creation of a missing vagina. SCHWARTZ and RÉNON. Bull. et mém. Soc. de chir. de Par., 1913, xxxix, 403.

Creation of a new vagina with report of a case of transplantation of the small intestine into the vagina. BROUHA. Bull. Acad. r. Med. de Belgique, 1913, xxvi, 152. [320]

Vesico-vaginal fistula cured by transplantation of fascia lata. SCHMID. Ztschr. f. gynäk. Urol., Leipzig, 1913, iv, 33. [320]

Contribution to the study of primary carcinoma of the vulva. SAVARÈ. Ann. di ostet. e ginec., 1913, xxxv, 238. [321]

Incomplete ano-vulvar atresia (atresia anivaginalis). D. C. SELVAS Y BOTÓG. Med. de los niños, 1913, xiv, 90.

Basedow and genital glands. GRAFF and NOVAK. Deutsche Gesellsch. f. Gynäk., Halle, 1913. [321]

A contribution to the chemistry of vaginal secretions. E. GRÄFENBERG. Deutsche Gesellsch. f. Gynäk., Halle, 1913. [321]

The causes and treatment of vaginal discharges. JOLY. Ann. de la policlin. centr. de Brux., 1913, xiii, No. 3.

The treatment of leucorrhœa in a woman. KATZ. Berl. klin. Wchnschr., 1913, l, No. 17.

Gonorrhœa in the female. F. R. FURSEY. Med. Council, 1913, xviii, 169.

The treatment of gonorrhœal infections with tanargentan suppositories. R. POLLAND. Deutsche med. Wchnschr., 1913, xxxix, 656. [322]

Contribution to melano-sarcoma of the clitoris. E. VOGT. Arch. f. Gynäk., 1913, xcix, 364. [322]

Cysts in the region of the clitoris. LEFEVRE and LOUBAT. Paris méd., 1913, No. 22.

Miscellaneous

Spontaneous gangrene of the genital organs in man and in woman. SPILLMAN, THIRY and BENECH. Paris méd., 1913, ii, 319. [322]

The thyrogenous etiology of hæmorrhagic metropathies,

with remarks on the theory of eclampsia and habitual miscarriages. SEHRT. München. med. Wchnschr., 1913, lx, No. 18.

Cases illustrating certain urinary conditions in women associated with frequent or painful micturition. D. NEWMAN. Glasgow M. J., 1913, lxxix, 342.

Calculi deposited about a ligature in the female bladder. HIRSCHBERG. Ztschr. f. gynäk. Urol., 1913, iv, No. 3.

Endoscopic exploration of the bladder and the ureters in uterine cancer. LENORMANT. Presse méd., Par., 1913, xxi, No. 43.

Menstrual molimina. C. CHISHOLM. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 288. [322]

The relation of acute infectious diseases to the female genitalia. STOLZ. Klin.-therap. Wchnschr., Berl., 1913, xx, No. 18.

Clinical manifestations of genital tuberculosis in women. W. O. HENRY. Med. Herald, 1913, xxxii, 175. [323]

Management of genital tuberculosis in women. P. FINDLAY. Med. Herald, 1913, xxxii, 181. [323]

The influence of the climacteric on cancer. THEILHABER. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [323]

Multiple primary cancer of the female genital organs. HAUSER. Arch. f. Gynäk., 1913, xcix, 339. [324]

Specific treatment in pelvic infections. J. FARBACH. Lancet-Clin., 1913, cix, 511.

The bacteriological control of asepsis in gynecological laparotomies. W. SIGWART. Arch. f. Gynäk., Berl., 1913, xcix, 284.

Psychopathies of genital origin. R. SCHOCKAERT. Bull. Soc. belge de gynéc. et d'obst., Brux., 1913, xxiii, 263.

The employment of phobol in gynecological and obstetrical practice. J. S. KALABIN. Pract. Vrach, St. Petersburg., 1913, xii, 243.

A case of acromegaly following castration in an adult woman. K. GOLDSTEIN. München. med. Wchnschr., 1913, lx, 757. [324]

Methods of physical treatment in gynecology. FRANZ. Ztschr. f. ärzte, Fortbild, 1913, x, 137. [324]

Synthetic Hydrastin-Bayer, a substitute for fluid extract hydrastis canadensis. WALTHER, München. med. Wchnschr., 1913, lx, 694. [325]

X-ray treatment in gynecology. KLOTZ. Deutsche Gesellsch. f. Gynäk., Halle, 1913. [325]

Röntgenotherapy in gynecology. KREUZFUCHS. Deutsche med. Wchnschr., 1913, xxxix, No. 19.

Technique of X-ray treatment in gynecology. FRANKL. Gynäk. Rundschau, 1913, vii, 247. [325]

Röntgen rays and mesothorium in gynecological therapeutics, especially also in uterine cancer. DÖDERLEIN. Monatschr. f. Geburtsh. u. Gynäk., Berl., 1913, xxxvii, No. 5.

Statistical study of the published cases of gynecological affections treated by Röntgen rays up to the first of January, 1913. MOHR. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 2.

Gynecological deep Röntgen-ray therapy. ALBERS-SCHÖNBERG and GAUSZ. Zentralbl. f. Gynäk., 1913, xxxvii, 604.

A new uterine curette. JAMBE. Rev. méd. de la suisse Rom., Genève, 1913, xxxiii, No. 5.

OBSTETRICS

Pregnancy and Its Complications

A case of full term ectopic gestation with a dead foetus retained in the abdominal cavity for eight months. R. PETERSON. *Physician & Surg.*, 1913, xxxv, 198. [326]

A case of pregnancy five years after a piccoli operation for puerperal inversion of the uterus. NEUGEBAUER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 529. [326]

Clinical data on extra-uterine pregnancy. CHOMIAKOVA-BOUCLOVA. *J. akush. i jensk. bolez.*, St. Petersburg, 1913, xxviii, April.

Diagnosis and treatment of extra-uterine pregnancy; also communications with regard to an uninterrupted series of over one hundred operative cures. MUHSAM. *Therap. d. Gegenw.*, Berl., 1913, liv, No. 3.

A concomitant extra-uterine and intra-uterine pregnancy. JARCA. *Revista de chir.*, 1913, i, No. 1.

A case of full term extra-uterine pregnancy with living child. N. G. KRASNOPOLSKY. *Russ. Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 225. [326]

The treatment of extra-uterine pregnancy. FALK. *Arch. f. Gynäk.*, Berl., 1913, xcix, No. 3.

Coincidence of tubal and uterine pregnancy. CLAVERIS. *Normandie méd.*, Rouen, 1913, xxix, No. 9.

Full term pregnancy in an accessory tube of a bicorant uterus. HOLLÄNDER. *Arch. mens. d'obst. et de gynec.*, 1913, ii, 393. [326]

Interstitial pregnancy. SIEFART. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 375. [327]

Young ovarian pregnancies. PAUCOT and DEBEYRE. *Echo méd. du nord, Lille*, 1913, xvii, No. 20.

Total ablation of the uterus associated with multiple fibromata during pregnancy. TERECHENKOFF. *J. akush. i jensk. bolez.*, St. Petersburg, 1913, xxviii, April.

Carcinoma of the uterus in pregnancy. FLOHIL. *Nederl. Maanschr. v. Verlosk. en Vrouwenz. en Kindergeneesk.*, Amst., 1913, ii, 18.

Pregnant uterus of three months associated with a large portiocarcinoma causing a foul discharge. WEINBRENNER. *München. med. Wchnschr.*, 1913, lx, 1232.

Pituglandol in the treatment of placenta prævia. P. GALL. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 334. [327]

The toxæmias of pregnancy. W. G. DARLING. *Wis. M. J.*, 1913, xi, 375.

Pregnancy-serum; therapy of pregnancy toxicoses. W. RÜBSAMEN. *Deutsche med. Wchnschr.*, 1913, xxxix, 931.

Symptoms and pathology of eclampsia. J. M. BUCH. *Hosp. Bull. Univ. Md.*, 1913, ix, 41.

Eclampsia and its treatment. A. Y. LINVILLE. *South-ern M. J.*, 1913, vi, 331.

Carbohydrate metabolism in pregnancy and in eclampsia; a few words concerning the insufficiency of the liver. W. C. BENTHIN. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 305. [327]

Researches on puerperal eclampsia. CHIRIÉ. *Epilepsia*, 1913, iv, 194. [327]

The toxicity of urine during the puerperium and in eclampsia. ZINSSER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 481. [327]

The state of viscosity of the blood in eclampsia as well as in other affections and lesions of the female organism. ENGELMANN and ELPERS. *Gynäk. Rundschau*, Berl., 1913, vii, No. 9.

Cæsarean section. J. M. WILSON. *Southern M. J.*, 1913, vi, 334.

The classical Cæsarean operation. KOUTACOFF. *Vrach. Gaz.*, St. Petersburg, 1913, xx, No. 17.

The technique of the Cæsarean section. J. VEIT. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 713.

Cæsarean section because of vaginal stenosis following a previous operation for vesical fistula. BECKMANN. *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, No. 3.

Cæsarean section, with especial reference to the rarer indications for the operation. W. H. MAXWELL. *Brit. M. J.*, 1913, i, 1105.

The Cæsarean operation upon the dead and upon the dying. KITNERA. *J. akush. i jensk. bolez.*, St. Petersburg, 1913, xxviii, April.

The results obtained with the Cæsarean section in Russia during the last twenty-five years. POBEDINSKY. *Zentralbl. d. Gynäk.*, 1913, xxxvii, No. 21.

The treatment of abortion. E. B. HOWELL. *Iowa M. J.*, 1913, xix, 566.

Consideration of the treatment of abortion. R. F. ZAPPI. *Clin. Ostetr.*, 1913, xv, 130. [328]

The treatment of septic abortion. AUBERT. *Rev. suisse de méd.*, 1913, xiii, No. 15.

End results of the conservative treatment of streptococcus abortion. M. TRAUGOTT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913. [328]

Pregnancy, delivery and puerperium in extensive hemilateral telangiectasis with formation of varicose veins associated with lymphangiectatic elephantiasis. DREWS. *Berl. klin. Wchnschr.*, 1913, i, No. 17.

Pregnancy during leucæmia and its influence on the composition of the blood. G. J. MELNIKOFF and G. T. ZOMAKION. *Russk. Vrach*, 1913, xxii, 294. [328]

A case of severe endometritis in pregnancy. ALBERT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913. [329]

The treatment of pregnancy pyelitis. BRONGERSMA. *Nederl. Tijdschr. v. Geneesk.*, Amst., 1913, i, 529. [329]

Pyelonephritis of pregnancy. LE FUR. *Paris chir.*, 1913, v, No. 2.

Cholecystitis and cholelithiasis associated with pregnancy. R. M. GREEN. *Boston M. & S. J.*, 1913, clxviii, 679. [329]

Addison's disease and pregnancy. E. VOGT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [329]

Pregnancy, labor and puerperium in a case of extensive unilateral telangiectases and varicose formation with lymphatic elephantiasis. DREWS. *Berl. klin. Wchnschr.*, 1913, i, 779. [329]

Thyroid and pregnancy. E. MOSBACHER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [330]

Thyroid and pregnancy. GRAFF. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [330]

Changes in the pineal glands in pregnancy. ASCHNER. *Deutsche Gesellsch. Gynäk.*, Halle, 1913, May. [330]

Disturbances of metabolism in pregnancy, labor and puerperium. SEITZ. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [330]

Heart lesions in pregnancy. KREISS. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [332]

Albuminuria in pregnancy. ASCHNER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [333]

Researches concerning the after life of pregnancies complicated by heart and kidney lesions. K. BAISCH. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913. [333]

The interruption of pregnancy in disease of the kidneys. SCHLAYER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [333]

Bilateral ovariectomy during pregnancy. FUCHS. *Monatschr. f. Geb. u. Gynäk.*, 1913, xxxvii, 525. [334]

The etiology of hydrorrhœa amniotica. S. DIETRICH. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 645.

Retro-placental hæmorrhage. P. RUDAUX. *Clinique, Par.*, 1913, viii, 260.

Labor and Its Complications

The duties of the physician toward a woman in labor. E. A. COTRET. *Union méd. du Canada*, Montreal, 1913, xlii, 31.

Difficult labor caused by foetal ascites. G. LUKER. *Lancet*, Lond., 1913, clxxxiv, 1309.

Death of woman in labor as a result of dilatation of the œsophagus. N. RIZZACASA. *Gior. internaz. d. sc. med.*, Napoli, 1913, xxxv, 301.

How many full-term children in cephalic presentation pass the inlet spontaneously in flat pelvis and are born alive? P. ESCH. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913. [333]

Breech presentations in the Amsterdam Clinic for Women from 1902 to 1911. H. TREUB. *Nederl. Tijdschr. v. Verlosk. en gynæc.*, Haarlem, 1913, xxii, 103. [334]

Foetal abnormality complicating delivery. D. S. HANSON. *Cleveland M. J.*, 1913, xii, 323.

Difficult delivery following vaginal fixation; a case complicated by papyraceous foetus. UTHMOLLER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 18.

A case of rupture of the uterus during delivery; recovery. OUTROBINE. *J. akush. i jensk. bolez.*, St. Petersburg, 1913, xxviii, April.

Recurrent ruptures of the uterus during delivery. MIRONOVA. *Russk. Vrach*, St. Petersburg, 1913, xii, No. 16.

Case of rupture of vaginal fornix during labor. E. A. BJÖRKENHEIM. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 269. [334]

A case of uterine rupture following the employment of pituitrin. HERTZ. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 20.

Abruptio of placenta due to short cord. W. C. QUINCY. *Med. World*, 1913, xxxi, 199.

Utero-pelvic phlebitis in women in confinement. JEANIN. *Paris méd.*, 1913, No. 22.

The use of the obstetric forceps. W. RITTENHOUSE. *Am. J. Clin. Med.*, 1913, xx, 403.

Puerperium and Its Complications

A contribution to the etiology of late hæmorrhages in the puerperium. F. A. LOOFS. *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 225. [334]

Differential diagnosis of hæmorrhages in interrupted tubal pregnancy and in early uterine abortion. FÜTH. *Med. Klin.*, 1913, ix, No. 21.

Three cases of symmetrical necrosis of the cortex of the kidneys, associated with puerperal eclampsia and suppression of urine. R. JARDINE and A. M. KENNEDY. *Lancet*, Lond., 1913, clxxxiv, 1291.

Inversion of uterus in puerperium. W. ZANGEMEISTER. *München. med. Wchnschr.*, 1913, lx, 616. [335]

An extraordinary case of extensive necrosis of the puerperal uterus. VON REDING. *Cor.-Bl. f. schweiz. Ärzte*, 1913, xliii, No. 21.

A critical review of the medical and surgical treatment of puerperal eclampsia. G. ZINKE. *Lancet-Clin.*, 1913, cix, 603. [335]

Prophylactic treatment of puerperal infection by intra-

venous injection of collargol. COHN. *Revista de chir.*, 1913, i, No. 1.

Puerperal traumatic neuritis. MESSA. *Ginecologia*, Milano, 1913, ix, No. 23.

Post-partum paralysis of the peroneal nerve. STAUDE. *Monatschr. f. Geburtsh. u. Gynäk.*, Berl., 1913, xxxvii, No. 5.

Miscellaneous

Is obstetrics surgery? S. LEIGH. *Va. M. Semi-Month.*, 1913, xviii, 81.

Obstetrics in the country. M. A. WARHURST. *J. Okla. St. M. Ass.*, 1913, v, 536.

Obstetrics among the Indians. G. W. HARVEY. *Calif. Eclectic M. J.*, 1913, vi, 99.

The pulse and arterial pressure in the new-born. P. BALARD. *Gaz. d. hôp.*, Par., 1913, lxxvi, 837.

Researches on sex determination. A. PINARD and MAGNAN. *Compt.-rend. hebd. Acad. d. sc.*, Par., 1913, clvi, 1396.

The origin of respiratory movements in the foetus. B. DEDEK. *Lek. rozhledy*, 1913, ii, 82. [336]

The influence of the X-rays on the foetal membranes. M. KAWASOYE. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 488. [336]

Demonstration of a foetus with a solid embryoma of coccyx. E. AULHORN. *München. med. Wchnschr.*, 1913, lx, 667. [336]

A case of foetal retention; diagnosis by radiography. A. SCHWAAB and ALBERT-WEIL. *Bull. et mém. Soc. de radiol. méd. de Par.*, 1913, v, 109.

A case of malformation during the eighth month of pregnancy. BAISCH. *Monatschr. f. Gesellsch. u. Gynäk.*, 1913, xxxvii, 538.

The time when luetic infection occurs in the foetus and its clinical significance. TRINCHESE. *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 201. [336]

A case of delayed maconium expulsion. M. SOLDIN. *Jahrb. f. Kinderheilk.*, 1913, lxvii, 453. [337]

The determination of pregnancy during the first three months made difficult on account of pathological conditions directly or reflexively involving the generative organs. A. E. SMITH. *Am. Inst. of Homœopathy*, 1913, v, 1180.

Practical application of Abderhalden's biological test of pregnancy. H. SCHWARZ. *Interst. M. J.*, 1913, xx, 393.

Experience with the Abderhalden reaction. SCHLIMPERT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913. [337]

Researches on the utility of Abderhalden's ferment reaction in pregnancy and carcinoma. MARKUS. *Berl. klin. Wchnschr.*, 1913, l, No. 17.

Concerning Schottlander's publications on the determination of the length of pregnancy by means of histological examination of the placenta. PETERS. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 373. [337]

Alterations of the blood during pregnancy. CANTONI. *Arch. f. Gynäk.*, Berl., 1913, xcix, No. 3.

Surgical treatment of hæmorrhages of pregnancy, labor, and the puerperium. BAR. *Gynäk. Rundschau*, 1913, vii, 163. [337]

Is albuminuria likely to occur in successive pregnancies? M. SLEMONS. *Am. J. Obst.*, N. Y., 1913, lxvii, 849. [338]

Significance of urinalysis in pregnancy. J. C. CUNNINGHAM. *J. Ark. M. Soc.*, 1913, ix, 286.

The relation of the affections of the urinary organs to pregnancy, delivery and puerperium. ZANGEMEISTER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913.

The abstraction of calcium salts from the mother's blood by the foetus, the cause of the rapid progress of tubercular processes. J. G. DRENNAN. *Am. J. Obst.*, N. Y., 1913, lxvii, 893.

The position of the uterus after delivery, at term and during the sequelæ of immediate and tardy delivery. BOUFFE and SAINT-BLAISE. *Paris méd.*, 1913, No. 22.

Crédé's manipulation and uterine inversion. BIERER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 21.

Serological and clinical investigations concerning pregnancy pyelitis. I. Anti-bodies in the maternal and foetal blood in pregnancy pyelitis. W. WEIBEL. *Arch. f. Gynäk., Berl.*, 1913, xcix, 245.

A case of a hydatiform mole. WEYMEERSCH. *J. méd. d. Brux.*, 1913, xix, No. 17.

A case of ectoplacental epithelioma. BASSAL and CLERMONT. *Arch. gén. de chir., Par.*, 1913, vii, No. 4.

Action of the placental extract upon the vascular system and upon blood coagulation. G. COLLE. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, 394. [338]

The effect of hypophyseal extract (pituglandol). M. GUGGENHEIM. *Med. Klin.*, 1913, ix, 755.

The treatment of syphilis in pregnant women by means of salvarsan. LEREDDE. *J. de méd. de Par.*, 1913, xxxiii, 325.

Momburg's method. BOULATNIKOFF. *Kharkovsky med. J., Kharkov*, 1913, xv, No. 2.

GENITO-URINARY SURGERY

Kidney and Ureter

Morphological study of the arteries of the suprarenal capsules in man. G. GÉRARD. *J. de l'anat. et de physiol., Par.*, 1913, xlix, 269.

Suprarenal glands and toxic infections. A. MARIE. *Ztschr. f. Immunitätsforsch. u. exp. Therap.*, 1913, xvii, 420.

The relation between chromaffin substance and adrenalin in the suprarenal capsules. W. NOWICKI. *Przegl. chir. i ginek.*, 1913, vii, 169. [339]

The origin of the hydatids of Morgagni. MACCABRUNI. *Ann. di ostet. e ginec., Milano*, 1913, xxxv, No. 4.

The physiology of kidney innervation. LOBENHOFFER. *Deutscher chir. Kong.*, 1913. [339]

The sympathetic relationship of the kidneys. CATHELIN. *Bull. méd., Par.*, 1913, xxvii, No. 39.

Secretion of hæmoglobin through the kidneys. H. RIBBERT. *Zentralbl. f. allg. Path. u. path. Anat.*, Jena, 1913, xxiv, 241.

The renal origin of certain hæmoglobinuria in children. GAUJOUX. *Sud méd., Marseille*, 1913, xlv, No. 1960.

So-called essential hæmaturia. A. SCHÜPBACH. *Ztschr. f. urol. Chir.*, 1913, i, 270.

The arteries of the healthy and of the diseased kidney in the X-ray picture. HAUCH. *Fortschr. a. d. Geb. d. Röntgenstr., Hamb.*, 1913, xx, No. 2.

The weight of the kidney in the various surgical affections of this organ. CATHELIN. *Paris chir.*, 1913, v, No. 2.

Radiodiagnosis of pseudo-calculi of the kidney. M. PONZIO. *Arch. d'élect. méd., Bordeaux*, 1913, xxi, 258.

Renal and urethral calculi. I. ABELL. *Ky. M. J.*, 1913, xi, 406. [339]

Subparietal rupture of the kidney, with report of cases. A. H. BARKLEY. *Lancet-Clin.*, 1913, cix, 475. [340]

The physical treatment of floating kidney. L. FELLMER. *Ztschr. f. Balneol., Klimatol. u. Kurort-Hyg.*, 1913, v, 711.

Experimental researches on torsion of the kidney. G. RAZZABONI. *Pathologica*, 1913, v, 230.

The clinical significance of malformations of the kidney, the renal pelvis, and the ureters. C. ADRIAN and A. VON LICHTENBERG. *Ztschr. f. urol. Chir., Leipz.*, 1913, i, 139.

Dilation and infection of the renal pelvis. VOELCKER. *Ztschr. f. urol. Chir., Leipz.*, 1913, i, 112. [340]

Colon bacillus infection of the kidney. W. AYRES. *Med. Rec.*, 1913, lxxxii, 968.

Diagnosis and treatment of bilateral renal tuberculosis. C. PERRIER. *Rev. med. de la Suisse Roma*, 1913, xxxiii, 313.

The medical treatment of renal tuberculosis. ORAISON. *J. de méd. de Bordeaux*, 1913, xlii, No. 21.

Tuberculin in the treatment of urinary tuberculosis. BARTRINA. *Ann. d. Acad. y Lab. de cienc. med. de Catalunya, Barcel.*, 1913, vii, No. 4.

A case of post-operative serous perinephritis. BAUER-EISEN. *Ztschr. f. gynäk. Urol.*, 1913, iv, No. 3.

Symptoms of intestinal occlusion in nephritic colic. GUÉNU. *Bull. méd.*, 1913, xxvii, 207. [341]

A case of right intermittent hydronephrosis provoked by two accessory renal arteries; operation with removal of these vessels; recovery. ALEMAN. *Nord. med. Ark., Stockholm*, 1913, xlv, May.

Primary tumors of the renal pelvis. MOCK. *J. d'urol., Par.*, 1913, iii, No. 5.

Complex tumor of the kidney, associated with nodules of hypernephroma. ROMANO. *Folia urol., Leipz.*, 1913, vii, No. 8.

Epithelioma of the kidney of the foetal type. MÜLLER and SAVV. *Loire méd.*, 1913, xxxii, No. 5.

The structure and histogenesis of congenital kidney neoplasms. DIENST. *Ztschr. f. gynäk., Urol.*, 1913, iv, 45. [341]

Perirenal hæmatoma. SPEESE. *Surg., Gynec. & Obst.*, 1913, xvi, 570. [342]

Voluminous cysts of the kidney. Cystostomy in addition to nephrectomy as a treatment for very advanced reno-vesical tuberculosis. PASQUEREAU. *Gaz. méd. de Nantes*, 1913, xxxi, No. 18.

Large solitary cysts of the kidney. H. MENDELSON. *Ztschr. f. urol. Chir.*, 1913, i, 295.

Hæmorrhagic cyst of the kidney; serous cyst of the kidney. GUILIANI. *J. d'urol., Par.*, 1913, iii, No. 5.

Preliminary report upon the use of indigo-carmin intravenously as a test of renal function. H. D. FURNISS. *Surg., Gynec. & Obst.*, 1913, xvi, 567. [342]

The value of pyelography in the diagnosis of surgical diseases of the kidney. F. E. KEENE. *Penn. M. J.*, 1913, xvi, 616.

Acute septic infection of the kidney and its surgical treatment. E. JOSEPH. *Urol. & Cutan. Rev.*, 1913, xvii, 189. [342]

Experiences with the transplantation of kidneys. MANTILLI. *Gazz. d. osp. e d. clin., Milano*, 1913, xxxiv, No. 54.

Decapsulation of the kidney. WARITCHEFF. *Chir. arch. Veliaminova, St. Petersburg*, 1913, xxix, No. 2.

Renal function after decapsulation of the kidney. LA-FEYRE. *J. de Physiol. et de Pathol. gen.*, 1913, xv, 241. [342]

Anatomical lesions of the kidney following artificial occlusion of the ureter. KAWASOYE. *Ztschr. f. gynäk. Urol.*, 1913, iv, No. 3.

Contribution to the study of calculi of the intraparietal portion of the ureter. PASCUAL. *J. d'Urol.*, 1913, iii, 447. [343]

Calculus of the right pelvic ureter. NOGIER. *Lyon méd.*, 1913, cxx, No. 20.

An instance of large ureteral calculus and some other cases of calculi. G. WHERRY. *Brit. M. J.*, 1913, i, 1043.

Incarcerated ureteral calculi. E. BOROSS. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 94.

Impacted ureteral calculi released by fulguration. H. D. FURNISS. *J. Am. M. Ass.*, 1913, lx, 1534. [343]

Passage of ureteral stones after intra-ureteral manipulations. J. L. RANSOHOFF. *Lancet-Clin.*, 1913, cix, 537.

Bilateral ureterolithotomy in calculus anuria. A. LÄWEN. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 411.

Hæmaturia. V. C. PEDERSEN. *N. Y. M. J.*, 1913, xcvi, 905.

Infections of the upper urinary tract in infancy and childhood. R. M. GREEN. *Boston M. & S. J.*, 1913, clxviii, 645. [344]

Case of ureteral abscess. W. A. JACK. *Wash. M. Ann.*, 1913, xii, 179.

Congenital fistula of the ureter. UTEAU and BASSAL. *J. d'Urol., Par.*, 1913, iii, No. 5.

Congenital pocket of the ureter showing tardy development. THÉVENOT. *Lyon chir.*, 1913, ix, No. 5.

A case of anomalous position of the ureteral orifices. UTEAU and SAINT-MARTIN. *Toulouse méd.*, 1913, xv, No. 8.

Extravesical orifice of the ureter in a woman. HARTMANN. *Hosp.-Tid., Kjøbenh.*, 1913, lvi, No. 22.

Accessory ureters. A. PAWLOFF. *Deutsche Ztschr. f. Chir.*, 1913, cxxi, 425. [344]

Stenoses of the ureter; their relation to the genital function in man. DE MEO. *Folia urol., Leipz.*, 1913, vii, No. 9.

The effect of thyosinnamin in stenosis of the ureter. LÉVY-WEISSMANN. *J. d'Urol., Par.*, 1913, iii, No. 5.

Sounding of the ureters after Pawlik's method. J. PETRIVALSKY. *Čas. lék. Česk.*, 1913, lii, 393.

Preparing an intraperitoneal course for the urinary ducts. BOLTJES. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 2.

Implantation of the ureters into the large intestine. LEGUEU. *Clinique, Par.*, 1913, viii, No. 20.

The local treatment of retention of urine and pus by means of ureteral catheterization. ZUCKERKANDL. *Wien. med. Wchnschr.*, 1913, lxiii, No. 22.

Bladder, Urethra, and Penis

The permeability and absorbant power of the bladder. NICLOUX and NOWICKA. *J. de physiol. et de path. gén.*, 1913, xv, 296.

Some reflections suggested by a bladder case. F. W. LARGRIDGE. *Clin. J.*, 1913, xlii, 75.

Vesical herniæ. M. CHUDOVSKY. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 102.

An enormous calculus of the bladder. LOUMEAU and DELAYE. *Gaz. hebdomadaire de médecine et de chirurgie*, 1913, xxxiv, No. 19.

Diabetes and vesical calculus. GOLDBERG. *Med. Klin.*, 1913, ix, No. 17.

An extraordinary calculus formed about a foreign body. G. W. MALY. *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, 89.

Surgery of stone of the bladder, prostate and ureters. STEILNER. *Folia urol.*, Leipzig, 1913, vii, No. 8.

Congenital diverticulum of the bladder with a contractile orifice. BUERGER. *J. d'Urol., Par.*, 1913, iii, No. 5.

Cystoscopic pictures of bilharzia of the bladder. JOSEF. *Deutsche Ges. f. Gynäk.*, Halle, 1913.

Syphilis of the bladder. LEVY-BING and DUROEUX. *Ann. d. mal. vener.*, Par., 1913, viii, 241.

Syphilitic affections of the bladder. R. PICKER. *Orvosi hetil.*, Budapest, 1913, lvii, 136.

Gonorrhœal cystitis. R. CASTORINA. *Gazz. internaz. di med. chir.*, ig., Napoli, 1913, No. 13, 299.

Simple ulcer of the bladder. BUERGER. *Folia urol.*, Leipzig, 1913, vii, No. 9.

Simple ulcers of the bladder. LEGUEU. *Progrès méd.*, Par., 1913, xli, No. 19.

Therapeutic fistulization of the bladder. LOUMEAU. *J. d. med. d. Bordeaux*, 1913, xliii, No. 7. [344]

Five cases of bladder growth. H. T. MURSELL. *Transvaal M. J.*, 1913, vii, 246.

Removal of a carcinomatous urinary bladder and transplantation of both ureters. SAMBORSKY. *Russk. Vrach.*, St. Petersburg, 1913, xii, 568.

On the question of the so-called implantation-relapses after removal of papillomata of the urinary bladder. A. SMIRNOFF. *Arb. a. d. chir. Klin. d. Prof. Fedoroff in St. Petersburg*, 1913, vii, 33.

Some cases of retarded vesical cicatrization after suprapubic prostatectomy. THÉVENOT and LACASSAGNE. *J. d'Urol., Par.*, 1913, iii, No. 5.

Removal of a mass of chewing gum from the bladder. J. O. RUSH. *Am. J. Urol.*, 1913, ix, 236.

The value of intravesical operations. KIELLEUTHNER. *München. med. Wchnschr.*, 1913, lx, 969.

Colpocystotomy. MARCHETTI. *Riforma méd.*, 1913, xxix, No. 21.

Further remarks on hypogastric lithotomy of the empty bladder. LASTARIA. *Presse méd.*, Par., 1913, xxi, No. 44.

Some indications for suprapubic cystotomy. L. GODARD. *Am. J. Urol.*, 1913, ix, 223.

The treatment of post-operative retention of urine.

RIBACK. *Novoié v med.*, St. Petersburg, 1913, vii, No. 5.

Stricture of the urethra. A. W. NELSON. *Eclect. M. J.*, 1913, lxixiii, 238.

The effects of posterior urethral inflammation centering in a colliculitis. P. ORLOWSKI. *Urol. & Cutan. Rev.*, 1913, xvii, 254.

Gonorrhœal urethritis anterior; its treatment, with special reference to abortive measures. A. L. SACHS. *Practitioner*, Lond., 1913, xc, 841.

Diagnosis and treatment of gonorrhœal affections in general practice. P. MULZER. *Springer*: Berlin, 1913.

Communications on gonorrhœa. BRANDWEINER and HOCH. *Wien. klin. Wchnschr.*, 1913, xxvi, 882.

A new treatment of acute gonorrhœa. O. L. MULOT. *Merck's Arch.*, 1913, xv, 146.

Para-urethra. J. L. HERMAN. *N. Y. M. J.*, 1913, xcvi, 919.

Some plastic operations on the penis and urethra. H. A. FOWLER. *Am. J. Urol.*, 1913, ix, 229.

Technique of external genitoplasty in the male. BONAMY and DARTIGUES. *Presse méd.*, 1913, xxi, 93. [345]

Meatotomy; a simple method. S. H. LIKES and H. SCHOENRICH. *J. Am. M. Ass.*, 1913, lx, 1359.

An instrument for radical removal of phimoses. HANS SPITZY. *München. med. Wchnschr.*, 1913, lx, 975.

Genital Organs

The pathology of ectopy of the testicles. UFFREDUZZI. Arch. f. klin. Chir., 1913, ci, No. 1.

Torsion of the testicle. SOCHSTCHIN. Chirurgia, 1913, xxxiii, 52. [346]

Tumors of the testicles and the rôle of trauma as a cause. MIYATA. Arch. f. klin. Chir., 1913, ci, No. 2.

A case of chorion-epithelioma of retained testis with multiple metastatic growths with notes on the etiology and pathology of chorion-epithelioma. T. S. TIRUMURTI. Practitioner, Lond., 1913, xc, 814.

Orchitis of the new-born and infantilism. PAYAN and MATTEI. Marseille méd., 1913, l, No. 10.

Acute rheumatic orchitis; report of a case associated with erythema nodosum and acute torticulitis in a child aged two and one half years. M. H. BASS. J. Am. M. Ass., 1913, lx, 1608.

Affection of the epididymis, claimed as a secondary symptom of an accident. WAGNER. Med. Klin., 1913, ix, No. 20.

A suggestion for the improvement of the technique of illumination of hydroceles. P. A. GLUSCHKOW. Voïenno-med. J., St. Petersburg, 1913, ccxxxvi, 212.

The employment of autoscerotherapy in hydrocele. ZDANOWICZ. Ztschr. f. Urol., Berl., 1913, vii, No. 5.

Operative treatment of varicela. GOMOIU. Revista de chir., 1913, i, No. 1.

Vasostomy-radiography of the seminal ducts. W. T. BELFIELD. Surg., Gynec. & Obst., 1913, xvi, 568. [346]

The prostate gland and the origin of the corpora prostatica and of prostatitis hypertrophicans. G. FERULANO. Gior. internaz. d. sc. med., Napoli, 1913, xxxv, 337.

Carcinoma of the prostate. A. L. WOLBARST. Internat. J. Surg., 1913, xxvi, 164.

Carcinoma of the prostate. GEBELE. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, No. 5.

Hypertrophy of the prostate. J. M. CLEASON. N. Y. M. J., 1913, xcvi, 1019. [347]

The treatment of prostatic hypertrophy. J. R. CAULK. Tex. St. J. Med., 1913, ix, 21.

A year of surgery of the prostate. WILMS. Med. Klin., 1913, ix, 619.

Prostatectomy in the aged, with a report of two successful cases ninety years of age. H. A. MOORE. J. Indiana St. M. Ass., 1913, vi, 206.

The physical and intellectual energies after prostatectomy. LEGUEU. Bull. méd., Par., 1913, xxvii, 387.

Two cases of ulcerative granuloma of the genital organs cured by means of neosalvarsan. SABELLA. Policlin., Roma, 1913, xx, No. 5.

Total evulsion of the skin of the male genital organs. BELFRAGE. Nord. med. Ark., Stockholm, 1913, xlv, May.

Miscellaneous

Radiographic examination of the urinary tract. F. LEGUEU, P. PAPIN and G. MAINGOT. Gittler: Paris, 1913. [347]

Experimental investigations on bacterium coli infection of the urinary organs. O. HESS. Mitt. a. d. Grenzgeb. d. med. u. Chir., 1913, xxvi, 135.

The solubility of the principal stone-forming elements in the urine. LICHTWITZ. Ztschr. f. exp. Path. u. Therap., 1913, xiii, No. 2.

Tuberculin in the treatment of genito-urinary tuberculosis. C. A. COLEMAN. Ohio St. M. J., 1913, ix, 227.

Tropical or climatic buboes. A. J. J. TRIADO. Australas. M. Gaz., 1913, xxxiii, 442.

Significance of hiccup following operation on the urinary tract. MARION. J. d' urol., 1913, iii, 580. [348]

Venereal prophylaxis; why it sometimes fails. R. A. BACHMANN. J. Am. M. Ass., 1913, lx, 1610. [348]

Masturbation — injurious or harmless. W. J. ROBINSON. Am. J. Urol., 1913, ix, 238.

An unusual condition, causing impotence in the male. F. C. WALSH. Am. J. Urol., 1913, ix, 251.

Sexual impotence in the male. V. BLUM. Am. J. Urol., 1913, ix, 254.

Hermaphroditism; specimens. D. S. LAMB. Wash. M. Ann., 1913, xii, 173.

SURGERY OF THE EYE AND EAR

Eye

Angioma of the upper eyelid in a child of eighteen months, cured by bipolar electrolysis. DOLCET. Ann. d. Acad. y Lab. de cienc. med. de Catalunya, Barcel., 1913, vii, No. 4.

A case of pigmented sarcoma of the eyelid. TAMACHEFF. Russk. Vrach, St. Petersburg, 1913, xii, No. 15.

Treatment of disturbances of vision in acromegaly (operation on the canalis opticus). SCHLOFFER. Deutscher chir. Kong., 1913.

Serious injuries of the eyes and the face by so-called water-core and zodiac golf balls. OHLEMAN. Klin.-therap. Wchnschr., 1913, xx, No. 20.

Eye unconsciously injured. S. MITCHELL. Ophth. Rec., 1913, xxii, 245.

The eyes as a nidus of general infection. J. D. DODGE. Elect. M. J., 1913, lxxiii, 241.

The relation of accessory cavity disease to the eye and the orbit. E. BROWN. Ohio St. M. J., 1913, ix, 207. [349]

The influence of chronic sepsis upon eye disease. W. LANG. Lancet, Lond., 1913, clxxxiv, 1368. [349]

Streptococcic infection of both eyes. F. W. FRANKHAUSER. Penn. M. J., 1913, xvi, 646.

Tuberculosis of the eye and tuberculin. ZIEMINSKI. Med. i kron. lek., Warszawa, 1913, xlviii, No. 19.

Enucleation on account of sympathetic ophthalmia. DE LA PREDAJA. Rev. ibero-amer. de cienc. med., 1913, xxix, No. 104.

The incidence of ophthalmia neonatorum in London. N. B. HARMAN. Brit. M. J., 1913, i, 1099.

The use of vaccines in eye infections. J. G. DWYER. Arch. Ophth., 1913, xlii, 227. [349]

Restoration of the conjunctival sac. STANCULEANU and JIANU. Revista de chir., 1913, i, No. 1.

Development of membrana tectoria with reference to its structure and attachments. C. W. PRENTISS. Am. J. Anat., 1913, xiv, No. 4.

Hypopyon ulcer of the cornea and its treatment. C. M. HARRIS. Penn. M. J., 1913, xvi, 611.

A study of some forms of congenital cataract, with special reference to their clinical significance. D. T. VAIL. *Lancet-Clin.*, 1913, cix, 528. [349]

The intracapsular operation for cataract after the method of Professor Stanceanu. W. L. SIMPSON. *Ophth. Rec.*, 1913, xxii, 241. [350]

Five cases of hereditary cataract. CAMPBELL. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 144. [350]

The removal of senile cataract before maturity. JENNINGS. *Med. Herald*, 1913, xxxii, 97. [350]

Another view of the extraction in the capsule cataract operation. C. B. MEDING. *Arch. Ophth.*, 1913, xlii, 241. [350]

Glaucoma. W. H. CRISP. *Colo. Med.*, 1913, x, 162.

Contribution to the pathology of hæmorrhagic glaucoma. J. STAHL. *Arch. Ophth.*, 1913, xlii, 248. [350]

The colloidal theory and its application to glaucoma. R. SATTLER. *Lancet-Clin.*, 1913, cix, 498.

Glaucomatous tension relieved by anterior sclerotomy. G. D. HALLETT. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 178. [350]

Case of syphilis of the choroid and retina: Wassermann negative. J. H. WOODWARD. *Urol. & Cutan. Rev.*, 1913, xvii, 237.

A case of enlargement of the eye-ball. R. B. HIRD. *Ophth. Rev.*, 1913, xxxii, 137. [351]

Intra-ocular tumors. J. K. M. PERRINE. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 180.

Blindness of left eye due to pressure of distended maxillary antrum. G. H. POOLEY and M. B. WILKINSON. *Ophth. Rev.*, 1913, xxxii, 130. [351]

A sclerocorneal trephine. B. PUSEY. *J. Am. M. Ass.*, 1913, lx, 1537.

Some impressions of the Oxford Ophthalmological Congress and the Ophthalmological section of the British Medical Association at Birmingham. MCREYNOLDS. *Tex. St. J. Med.*, 1913, vii, 332. [351]

Ear

Spontaneous gangrene of the left auricle. RICHARD. *J. de méd. de Bordeaux*, 1913, xliii, No. 20.

Ossaceous cyst of the concha. DEDEK. *Čas. lék. česk.*, Prague, 1913, lii, No. 17.

Plication of the auricular cartilage in cases of prominent ear and hæmatoma. WIEMANN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 18.

Anæsthesia by means of infiltration in oto-rhino-laryngology. JACQUES. *Rev. méd. de l'est*, 1913, xlv, No. 10.

Radical operations on the ear under local anæsthesia, its technique and after-treatment. KULENKAMPFF. *Beitr. z. klin. Chir.*, 1913, lxxxiii, 546.

Acute suppurative otitis media due to bacillus typhosus.

J. J. THOMAS and D. A. PRENDERGAST. *Cleveland M. J.*, 1913, xii, 360.

The complications of acute middle ear suppurations. G. W. MACKENZIE. *Hahneman. Month.*, 1913, xlviii, 342.

Observations on the treatment of acute suppuration of the middle ear. P. G. GOLDSMITH. *Canad. J. M. & S.*, 1913, xxxiii, 339.

Middle ear diseases in infancy and childhood. E. G. SEIBERT. *Va. M. Semi-Month.*, 1913, xviii, 62.

Inflammation of the middle ear during diseases of childhood. SCHERE and KUTVIRT. *Čas. lék. česk.*, Prague, 1913, lii, No. 14.

Chronic otitis in its relation to constitutional disease. F. G. CAWSTON. *South African M. Rec.*, 1913, xi, 158.

Lavage of the tympanic cavity. BEAL. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 4.

A case of mastoid abscess without otorrhœa. W. A. WELLS. *Va. M. Semi-Month.*, 1913, xviii, 56. [351]

Primary osteitis; a case of mastoiditis associated with occipital osteitis. ANTOLI. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 2.

The operations for mastoid empyema and caries. B. ALEX RANDALL. *Therap. Gaz.*, 1913, xxxvii, 317.

Topography of the petromastoid cavity and its entrance in the adult. RAMADIER. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 4.

Partial chiseling open of the petromastoid bone. BONCOUR. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 3.

Serous and suppurative labyrinthitis — differential diagnosis. I. W. VOORHEES. *Boston M. & S. J.*, 1913, clxviii, 716. [351]

Symptomatology and pathogenesis of purulent labyrinthitis and indications for operations on the labyrinth. R. WOLFERZ. *St. Petersburg. med. Ztschr.*, 1913, xxxviii, 79.

Indications for and technique of trepanation of the labyrinth. HAUTANT. *Rev. hebdom. de laryngol. e otol. et de rhinol.*, 1913, xxxiv, No. 21. [352]

Trephining the labyrinth outside of the area of pyo-labyrinthitis. BOTEY. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 3.

Benign tumors of the upper respiratory passages associated with a tumor of the ear. JEDZIAK. *Przegl. lek.*, 1913, No. 18.

Two cases of endocranial complications of otic origin. BRUNETTI. *Arch. internat. de laryngol., d'otol., et de rhinol.*, Par., 1913, xxxv, No. 2.

The origin, symptomatology and operative treatment of brain abscesses caused by suppuration of the middle ear. K. UDVARHELYI. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 163.

Non-operative treatment of septicæmia and of otogenous pyemia. LANG. *Čas. lék. česk.*, Prague, 1913, lii, No. 17.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Primary malignant tumors of the nasal cavity and the accessory nasal sinuses. J. SAFRANEK. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 126.

Tumors in the neighborhood of the ostium pharyngeum tube. LAWNER. *Monatschr. f. Ohrenheilk. u. Laryngo-Rhinol.*, 1913, xl, 262. [353]

The etiology, symptomatology and treatment of nasal

polypus. W. H. CARTER. *Va. M. Semi-month.*, 1913, xviii, 85.

Cystic polypus in the nasal pharynx of a child. E. A. GRIFFIN. *Med. Rec.*, 1913, lxxxiii, 849.

Spheno-choanal polypi. KU-BO. *Arch. internat. de laryngol., d'otol. et de rhinol.*, Par., 1913, xxxv, No. 2.

- Pathogenesis of lupus of the inner nose. ALBANUS. Arch. f. laryngol. u. Rhinol., Berl., 1913, xxvii, 169.
- Intranasal deformities with their attendant sequelæ. C. B. WYLIE. Southern M. J., 1913, vi, 337.
- The successful treatment of atrophic rhinitis and ozona; a new remedy. L. JACOBS. N. Y. M. J., 1913, xcvi, 1143.
- Indications for operation on the inferior and middle turbinates and septum. I. CRUSHLAW. N. Y. M. J., 1913, xcvi, 972.
- Nasal operations for the removal of headaches. FRÖSE. Deutsche med. Wchnschr., 1913, xxxix, No. 20.
- Malignant tumors of the nasal sinus and the nasopharyngeal cavity. J. SENDZIAK. Arch. internat. de laryngol., d'otol. et de rhinol., 1913, xxxv, 371.
- Apparently non-suppurative nasal sinus disease. S. G. HIGGINS. Wis. M. J., 1913, xi, 369.
- Experience with the employment of the radical method in the treatment of chronic suppuration of the frontal sinus, the ethmoid bone and the maxillary sinus. MÜLLER. Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par., 1913, xxxix, No. 3.
- Grafts of adipose tissue following the radical operation for suppuration of the frontal sinuses. HALPERN. Vrach. Gaz., St. Petersburg, 1913, xx, No. 16.
- Post-operative obliteration of the frontal sinus. SAMOILENKO. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 2.
- The tonsil question again. J. M. RAY. Louisville Month. J., 1913, xix, 353. [353]
- Tuberculosis of the pharyngeal tonsil in the adult. A BRÜGGEMANN. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw., 1913, lxviii, 29.
- Phlegmonous inflammations of the palatine tonsils, considering especially their etiology and new experiments with local serotherapy. F. HENKE. Arch. f. Laryngol. u. Rhinol., Berl., 1913, xxvii, 289.
- Successful treatment of an inoperable tonsillar sarcoma by means of cuprase and X-rays. WOLZE and PAGENSTECHER. München. med. Wchnschr., 1913, lx, No. 19.
- Tonsillotomy or tonsillectomy? KÜTTNER. Med. Klin. Berl., 1913, ix, No. 21.
- Hypertrophied tonsils and adenoids. O. M. BROOKS. W. Va. M. J., 1913, vii, 374.
- The cause of enlarged tonsils and adenoids in children and their treatment with lymphatic gland extract. H. T. ASHBY. Brit. M. J., 1913, i, 1159.
- The prevention of adenoids. W. BRADY. Med. Rec., 1913, lxxxiii, 937.
- The treatment of adenoids and enlarged tonsils without operation. W. STEUART. Brit. M. J., 1913, i, 1157.
- A simple and satisfactory method for removing tonsils and adenoids. W. W. CARTER. Med. Rec., 1913, lxxxiii, 986. [353]
- The relative frequency of the craniopharyngeal canal in children and young people and the importance of this fact for my theory. CITELLI. Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par., 1913, xxix, No. 4.
- Speech without a larynx. E. W. SCRIPTURE. J. Am. M. Ass., 1913, lx, 1601.
- The phases of thyrotomy in cancer of the larynx; two recent cases. BRINDEL. Rev. hebdomadaire de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 18.
- Results obtained in two cases of carcinoma of the larynx which were early treated by external conservative operation. DELLA VEDOVA and L. CASTELLANI. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 65.
- Four cases of relapsing diffuse laryngeal papillomata in infancy cured by laryngostomy. HALPHEN and FONTAINE. Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par., 1913, xxxix, No. 4.
- Laryngeal tumor treated with seleniol. HOPE. Proc. Roy. Soc. Med., 1913, vi, LARYNGOL. Sect., 76. [357]
- Direct laryngeal examination. J. A. PRATT. N. Y. M. J., 1913, xcvi, 1076.
- Direct insolation and Röntgen-ray illumination of the tuberculous larynx. A. BLUMENTHAL. Arch. f. Laryngol. u. Rhinol., Berl., 1913, xxvii, 362.
- Laryngeal tuberculosis. R. LEVY. J. Am. M. Ass., 1913, lx, 1518. [353]
- The treatment of chronic stenosis of the larynx and trachea. H. L. LYNCH. Boston M. & S. J., 1913, clxviii, 753.
- Treatment of laryngeal stenosis following diphtheria. D. L. RICHARDSON. Boston M. & S. J., 1913, clxviii, 749. [354]
- The question of permanent intubation in the treatment of diphtheritic stenosis of the larynx. BRÜCKNER. Ztschr. f. Kinderh., 1913, vi, 500.
- The epiglottic suture; its value in indirect laryngoscopy. C. HORSFORD. Brit. M. J., 1913, i, 928.
- Operations on the larynx by the direct path of access. E. POLLATSCHEK. Beitr. z. klin. Chir., 1913, lxxxiv, 114.
- A case of complete laryngectomy under cocaine anesthesia. F. D. BOYD. Tex. St. J. Med., 1913, ix, 11.
- Apparently non-suppurative nasal sinus disease. HIGGINS. Wis. M. J., 1913, xi, 369. [354]
- Suspension laryngoscopy with report of cases. IGLAUER. Lancet-Clin., 1913, cix, 902. [354]
- Researches on noma. GASBARRINI. Policlin., Roma, 1913, xx, No. 5.

INTERNATIONAL ABSTRACT OF SURGERY

OCTOBER, 1913

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGERY OF THE HEAD AND NECK

HEAD

Tuffier: Traumatic Facial Hemispasm (Hémi-spasme facial d'origine traumatique). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 596.

By Journal de Chirurgie.

Tuffier presents a man thirty-seven years old, who was hit on the head and had a fracture of the bony auditory canal, followed by a suppuration in the middle ear. Slight facial paralysis with facial asymmetry came on shortly and at the end of six weeks was succeeded by symptoms of facial spasm with both gross and fibrillary contractions and some trouble with the sight.

The cause of the spasm is easily explained. The intimate connection of the facial nerve and the tympanic cavity makes it easy for the nerve to be irritated by the products of a middle ear disease and so develop functional troubles. This lesion develops from two weeks to a month after the trauma. Sometimes there is only spasm, but in others contractures between the attacks of spasms are seen. Complicating lesions of the eye or ear may be present.

This condition may last for some time, even several years, Tuffier's patient, after some weeks, seemed better and probably will recover entirely, despite the fact that there are permanent auditory and equilibratory disturbances, for there is no reaction of degeneration. The prognosis is good.

J. DUMONT.

Earl: The Limitations and Possibilities of X-Rays in Skull Diagnosis. *J.-Lancet*, 1913, xxxiii, 307.

By Surg., Gynec. & Obst.

Changes in the soft part of the brain, such as meningitis, abscess, hæmatoma or soft tumors, do not produce a sufficient change in density per se to be recognizable on the Röntgen plate. It is mainly

by their effect on the bony structures that diagnostic signs are obtained. Among the conditions producing local or general thickenings of the cranium are rickets, syphilis, acromegaly and osteitis deformans. Localized destructions may be endothelioma or metastatic tumors from the thyroid, mammary, prostate, ovary or suprarenal gland. An intracranial tumor may cause a marked local thinning of the skull by pressure atrophy.

Changes in the sella turcica and region may be due to hypophysial tumor or to other basilar growths such as tumor or cyst of neighboring structures. Primary conditions of the sphenoidal sinus may alter the form of the sella with or without affecting the bone structure. A sign of general intracranial pressure may be found in the digital impressions of the wall of the cranium-scalloped impressions separated by ridges corresponding to the outlines of convolutions. Other compression signs are the widening of the channels for the diploic veins as when the cavernous sinus is compressed the sphenoparietal sinus is seen to be greatly enlarged.

The work of localizing foreign bodies in the eye or orbit and the detection of pus and tumors in the accessory sinuses of the nose is well established and used as a routine in all the larger clinics.

HOLLIS E. POTTER.

Brown: The Diagnostic Evidence Obtained by X-Rays from the Lateral Aspect of the Skull, with Especial Reference to the Base and Its Adnexa. *Boston M. & S. J.*, 1913, clxviii, 882.

By Surg., Gynec. & Obst.

Since the contribution of Caldwell upon the value of the occipito-frontal projection of the cranium, the lateral projection has fallen more or less into disuse. All structures which are bilaterally placed are superimposed one upon the other and the picture thus obscured. But in lateral projections confirma-

tory evidence can be obtained concerning a suspected pathological condition. Frontal sinus disease, ethmoidal disease, etc., are more easily diagnosed with pictures in both planes than with the occipitofrontal alone.

In disease in the region of the sphenoid and pituitary body, the lateral view is absolutely essential to a complete understanding of the condition. There is a wide range of variations in the region of the pituitary body, all of which may or may not be called normal, and it requires a vast amount of experience to "read" accurately a lateral projection of this region.

J. H. SKILES.

Marchand: Traumatic Epilepsy (De l'épilepsie traumatique). *Clinique*, Par., 1913, viii, 210.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In this paper Marchand includes only those cases of traumatic epilepsy which followed head injuries. These constitute about 98 per cent of all cases, and occur at any age, though most of them are seen before the twentieth year. The interval between the injury and the first attack may vary greatly, but in most instances it does not exceed half a year. Convulsive attacks directly associated with the injury must be differentiated from those which do not appear till weeks or months later. The former are due to acute cerebral disturbances and usually disappear entirely with the subsidence of the acute symptoms, while the latter are the result of permanent changes which determine the convulsive attacks. The epileptic seizures happen most frequently after strong mental impressions, and the author thinks that the cerebral concussion has a great deal to do with their development. In many cases the injury is so slight that it must be looked upon as the exciting cause in an individual with a hereditary predisposition to fits. To this class belong the cases developing after trephine operations. The author denies that the surgical interference itself is the cause of the seizures, and advances the opinion that the disease for which trephining is indicated must be the cause.

HOLZWARTH.

Smirnoff: The Plastic Closure of Dural Defects (Über den plastischen Verschluss der Duradefekte des Gehirns). *Dissertation*, St. Petersburg, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This work covers the subject thoroughly. The author discards all methods employing alloplastic material. He reports the results of seventy-four experiments performed on dogs and rabbits. In the control experiments the defect was filled in by scar and glia tissue when a heteroplastic material was used. The material was slowly absorbed and a connective tissue capsule developed around it. If the cortex was not injured no adhesions formed between it and the implant. Delicate adhesions were however formed between the pia and the capsule. The author comes to the following conclusions in regard to heteroplastic methods. With brain injury present, adhesions cannot be prevented between the cortex and the

transplant. In uninjured cortex, adhesions are not observed. The least irritation of the cortex occurred when fish bladder and living peritoneum were used.

In the second part of the work the author discusses homoplastic methods. He also reports two unpublished cases in which on account of traumatic epilepsy a portion of the dura was extirpated and free fascia transplanted. He concludes that free fascial transplantation for dural defects must be given the preference above all other methods. Of special importance is the fact that it prevents cerebral prolapse. He does not consider free fat transplantation for dural defects practical and brings several arguments against this suggestion of Rehn. The cerebral pressure induced by the massive piece of fat implanted, according to the author, speaks against its practical application. Furthermore, the fixing sutures cut through the fatty tissue easily and the liquor cerebri escapes through these openings.

Smirnoff performed seven decisive experiments and comes to the following conclusions: the transplanted fat is converted into connective tissue in which islands of fat can be observed. After five weeks young connective tissue forms with new capillaries. After four months the connective tissue has become firm. In injured cortex, connective tissue from the cortex migrates into the fat. In uninjured cortex the fat lies firmly against the cortex. An extensive bibliography and twenty-one microphotographs accompany the monograph.

HESSE.

Wenglowski: The Operative Treatment of Hydrocephalus (Über die operative Behandlung des Hydrocephalus). *Chir. Arch. Weljaminsowa*, 1913, xxix, 179.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Hydrocephalus externus occurs less frequently than hydrocephalus internus. Even in the more extensive articles of Kausch, Payr, and V. Bramann, the former variety occupies only a small space. The author describes an interesting case belonging to that class. In a girl 9 months old operation revealed a large collection of fluid between the dura and the arachnoid. There were no evidences of cerebral atrophy. Free communication between the subdural space and the subcutaneous connective tissue was established to permit the fluid to drain away. To accomplish this a large piece of the dura and the skull was removed. The result was very gratifying. The fluid was rapidly absorbed by the connective tissue and the hydrocephalus disappeared. The case was observed for 5 months.

In the second part of this article the author discusses hydrocephalus internus and bases his arguments on the methods of drainage used by V. Bramann and Payr. The chief objections to ventricular drainage are the too rapid abstraction of the fluid and the variations in the pressure conditions. On this account the larger drainage tubes are to be discarded. Diverting the fluid into the general

circulation or into the abdominal cavity (Kausch) is to be avoided since by these methods the fluid is drained off too rapidly. On this account the fluid had better be led into the subdural space or into the subcutaneous tissue. A further drawback is the premature closure of the drainage opening. Wengowski made an attempt in 1906 to form a tube by utilizing the dura, and establish a communication between the subdural space and the ventricle. When employing this method great care is necessary that the dural vessels remain in communication with the flap. Formerly Boyer used the dura in the repair of a spina bifida in the lumbar region.

The author has used the method in two cases of hydrocephalus internus. The anastomosis may be made with the anterior or posterior horn of the lateral ventricle. The fluid is drained partially into the subdural space and partially into the subcutaneous tissue. In this way a wide surface is supplied for the gradual absorption of the liquid. The result in both cases operated on was very good. The late result in one case was likewise encouraging. After 1½ years the child's head was almost normal in its dimensions. The operative technique is simple, and can be carried out on rather debilitated children.

HESSE.

Archibald: Puncture of the Corpus Callosum.

Canad. M. Ass. J., 1913, iii, 451.

By Surg., Gynec. & Obst.

The problem of how best to give relief for cerebral compression from unlocalizable tumor is often a very difficult one. It is generally recognized that the subtemporal procedure of Cushing is the method of choice for the purpose of pure decompression. Sometimes, however, this method proves insufficient; in spite of a large submuscular hernia the symptoms persist. In such cases the reason may lie in the coincidence of a large hydrocephalus internus, such as is known to complicate cerebral tumor not infrequently. It was experiences of this sort which led to the puncture of the roof of the corpus callosum in an attempt to relieve the internal pressure.

The technique of the operation is as follows: On the right side, about a finger's breadth behind the coronary suture and 2 cm. from the mid-line, an opening is made with the Doyen burr, about 1.5 to 2 cm. in diameter. A slit opening is made in the dura and care is taken to avoid any large cortical vein. Then a hollow curved cannula is pushed in over the convexity of the cortex till it strikes against the falx, which membrane guides the further progress of the cannula downward, till the corpus callosum is reached. The instrument breaks bluntly through this structure with very slight force, whereupon the ventricular fluid is emptied, usually under some pressure.

The author reports four cases in which he performed puncture of the corpus callosum. Two were obstructive hydrocephalus of high grade in infants and the puncture gave only temporary relief. The

other two were cases of unlocalizable brain tumor. In one a subtemporal decompression was first done and this gave temporary relief. A second operation was performed and the corpus callosum punctured. This resulted in control of the symptoms. In the other case the puncture of the corpus callosum was done first but relief was not obtained until a subsequent subtemporal decompression was performed.

JAMES H. SKILES.

NECK

Poggiolini: Is It Always Possible to Avoid the Facial Twigs of the Cervico-Facial Branch of the VIIth Pair in Operations on the Submaxillary Fossa? (Est-il possible d'éviter toujours les rameaux faciaux de la branche cervico-faciale de la 7^e paire, dans les opérations sur la loge sous-maxillaire?) *Clin. chir.*, 1913, xxi, 1090.

By Journal de Chirurgie.

Deviations of the lower lip are frequently noted after incisions in the submaxillary fossæ and are due either to the division of the fibers of the platysma muscle or of the cervico-facial twigs of the facial nerve. They are comparatively unimportant, because, as a rule, they disappear spontaneously in time. It would, however, be desirable to avoid them altogether, if possible. According to the author, incisions must not be made in a region limited above by the posterior $\frac{2}{3}$ of the lower border of the jaw; below, by a line parallel with, and $\frac{1}{2}$ inch distant from, the precedent; behind, by the anterior border of the sterno-mastoid muscle; in front, by a line directly uniting the two first mentioned.

Six diagrams show the lines of incision the author considers safe. It may be objected that these lines remain far in front of the region where adeno-phlegmons of a very common variety have to be drained.

PIERRE FREDET.

Halpenny: The Thyroid and Parathyroid Problem.

Surg., Gynec. & Obst., 1913, xvi, 955.

By Surg., Gynec. & Obst.

The etiology of the enlargement and perverted secretion of the thyroid gland is still in doubt. It has been regarded as an infection, but could not be so demonstrated by Chambers by bacteriological methods. Chambers' work, however, points to the presence of toxins. McCarrison produced goiter by using the filtrate of a goitrous well but when the filtrate was boiled goiter could not be produced. Short believes goiter to be due to some metal which unites with iodine to form an insoluble compound.

Experiments by the author show that when the thyroid is removed the parathyroids assume the histological features of the thyroid. It is also noted that structural changes take place in the pituitary body when the thyroid is removed. Rogers' experiments indicate that there is an intimate relationship between the thyroid, pancreas and adrenals. Carlson and Woelfel demonstrated that goiter lymph when injected intravenously did not give any untoward results.

Rogers discovered thyreoglobulin and "nucleoproteid" as separate substances. Minute quantities of nucleoproteid injected subcutaneously produced acute thyroidism. The experiments up to date have not settled the question as to whether the symptoms are due to perverted or to increased thyroid secretion.

In the treatment of this condition the author recommends rest, quinine, hydrobromate, thymol and Rogers' antithyroid serum. Along surgical lines, he advises partial removal of the gland, using Crile's method of eliminating fear and nitrous oxide anæsthesia. Dunhill operates on all cases and uses local anæsthesia.

Tatum: Morphological Studies in Experimental Cretinism. *J. Exp. Med.*, 1913, xvii, 636.

By Surg., Gynec. & Obst.

Morphological observations were made on a number of rabbits which were thyroidectomized at the age of two or three weeks. At least two animals out of each litter were kept as controls. All were weighed at regular intervals. The present paper is based on a series of about twenty-five autopsies. The important observations may be summarized as follows:

Degenerative changes were noted in practically every parenchymatous organ. The most striking of these changes was serous imbibition by the most active cells of these organs. The changes noted in the glands of internal secretion corroborate the statement that removal of one gland of internal secretion results in changes in all the others. In this case, degenerative changes were marked in the hypophysis, thymus, ovary and testes, while hyperplasia was seen in the Islands of Langerhans and the medulla of the adrenal glands.

Tatum concludes that in the rabbit, athyroidism is responsible for grave degenerative changes in practically all organs and tissues of the body and that many of the symptoms of cretinism have an anatomical basis in organic cellular changes.

J. F. CHURCHILL.

Kuhn: The Frequent Occurrence of Mild Cases of Basedow's Disease and the Favorable Influence Exerted upon Them by Hygienic-Climate Factors (Über das häufige Vorkommen leichter Basedowfälle und ihre günstige Beeinflussung durch hygienisch-klimatisch Faktoren). *Med. Klin.*, 1913, ix, 834.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author was able to observe many recruits with a mild Basedow's disease, the diagnosis being confirmed by Rehn. He ordered them to service, and in spite of the severe bodily exertion incident to service an improvement and even a disappearance of all nervous and cardiac symptoms set in. The conclusion is drawn that Basedow's disease is not always to be considered etiologically as a thyrotoxicosis, but that the primary factor frequently is a disease of the nervous system. The condition improves under a

carefree and hygienically favorable life, even though absolute rest is not adhered to. The author believes with Kurschmann that the vago-sympathetic cause of Basedow's must be accepted in many cases. The fact that cure is obtained by operation does not contradict the theory, as secondary thyroid dangers also may induce the Basedow symptoms. A table showing the findings of eleven cases examined in the Charité is appended.

SCHLENDER.

Mannaberg: An Attempt to Influence Basedow's Disease by X-Rays Applied to the Ovaries (Über Versuche, die Basedowsche Krankheit mittels Röntgenbestrahlung der Ovarien zu beeinflussen). *Wien. klin. Wchnschr.*, 1913, xxvi, 693.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Based upon the theory of an interrelation existing between the thyroid gland and ovaries the author attempted to influence Basedow's disease by applying X-rays to the ovaries. The investigations were conducted on ten patients. In eight cases an increase in weight from 2.3 to 21 per cent occurred. In half of the cases the exophthalmus decreased; it disappeared entirely in one instance. The pulse rate decreased considerably in some cases, in others only slightly. Tremor was influenced favorably. The circumference of the neck and menstruation were not influenced. In three cases existing diarrhoeas disappeared after the first treatment. Two cases which improved under X-ray treatment became worse after the application of the rays to the thyroid gland, the third case remained uninfluenced.

LEMBCKE.

Schloffer: The Operative Treatment of Basedow's Disease (Über die operative Behandlung der Basedowschen Krankheit). *Prag. med. Wchnschr.*, 1913, xxxviii, 313.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the relations between the thyroid gland and the thymus and between the *formes frustes* and the thyrotoxic goiter heart. With internal treatment only temporary improvement takes place; with operative treatment about 75 per cent of the cases result in cure. Death following the operation occurs only in advanced cachexia due to status lymphaticus. The operation usually performed is the excision of half a lobe, preceded in weak individuals by ligation of the vessels. The thyroidea inferior should be saved on account of the danger of causing injury to the parathyroids. An aggravation of the symptoms occurs immediately after the operation, but in about two days improvement sets in, the restlessness, sleeplessness and tachycardia disappearing. Gradual recession of the other phenomena and increase in weight takes place. The exophthalmos persists for a considerable time. Naturally any irreparable cardiac degeneration remains; in 70 per cent of the cases, however, general improvement occurs.

The author then states his own results. Early operation is advised. In acute cases it is best to

order a rest cure, and await the disappearance of the stormy phenomena. The author warns against X-ray treatment, iodine and thyroid preparations. At operation iodine should not be employed and

the loss of blood should be minimized. Local infiltration is the anæsthetic of choice except in highly excited patients, when a general narcosis has to be employed.

BIERNATH.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Albrecht: The Internal Secretion of the Mamma (Zur Frage der inneren Sekretion der Mamma). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author comes to the conclusion that early removal of the breast in young lambs does not produce any appreciable influence upon the development of the animal as a whole, or upon any system of organs, especially the genitals, and has no effect upon heat, pregnancy and labor. The breast, therefore, cannot be considered an organ of internal secretion. The injections of mammary extract also did not lead him to suspect the presence of an internal secretion. The author's experiments confirm those of Fedoroff, Adler, Schiffman and Vystavell, in that an inhibition of the ovarian function follows the injection of mammary extract, even up to complete cessation of menstruation in woman, but it is doubtful if this action is specific for mammary extract. Different observations lead to the supposition that other organic extracts possess a toxic action. The action is probably due to substances of the nonlactating breast, which physically do not enter the circulation, and are absorbed only during lactation, when they are able to produce their inhibitory action upon the ovaries.

Ssinoserski: Paget's Disease (Zur Frage der sogen. Pagetschen Krankheit der Brustdrüse). *Chir. Arch. Welfaminowa*, 1913, xxix, 336.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The treatment consisted of 96 applications of Finsen light, which produced no improvement. Röntgen therapy produced some healing. After three years of rapid advancement with some calcareous deposits, the breast was removed and the axilla cleaned out. Healing followed. After a careful microscopical examination the author arrived at the conclusion, that it is impossible to differentiate between the so-called Paget's disease and the squamous-celled carcinoma which develops on the base of a chronic inflammatory condition.

HESSE.

Epstein: Amputation of the Intrascapular Thorax (Zur Frage der Amputatio interscapulothoracica). *Chirurgia*, 1913, xxxiii, 344.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This operation is one of those severe surgical attacks which are but rarely executed. According to accurate statistics compiled by Nedsjesliki, there are 128 cases reported in the literature, with defi-

nite data for prolonged observation. Thirteen patients died as the result of the operation. The combined statistics are as follows: death due to operation, 12 per cent; recurrence, 32 per cent; cures lasting less than a year, 39 per cent; and cures lasting longer than one year, 17 per cent. These figures are not so bad as they seem, since many of the cases date back to the pre-antiseptic age. The author observed five cases, three of which have previously been reported, all ending in recovery.

Two types of operative procedures are employed for these cases; one school (Pozzen, Tullio, Degenello, Owrtnchnikoff) employing a conservative method, endeavoring to accomplish their purpose with resection, and the other school (Nancrede, Ajello, Prianischnikoff, Berger, etc.) employing a radical method, removing the entire extremity and shoulder girdle. The author proposes a procedure based on the manner of spread of these tumors by the lymph and blood-stream of the shoulder. The operation consists in the removal of half of the shoulder girdle, the scapula and clavicle and resection of the humerus; the upper extremity can, however, be saved. According to this method a woman, forty-five years old, was operated. She had a tumor the size of a child's head involving the left scapula. At the operation the scapula and the acromial end of the left clavicle were removed. After several plastic operations the patient was discharged with a dragging shoulder, but a functionable hand and forearm. She died later from a severe paraproctitis and sepsis. The tumor proved to be a sarcoma.

SCHAAACK.

Carson: Interscapulothoracic Amputation of the Shoulder. *Ann. Surg.*, Phila., 1913, lvii, 796.

By Surg., Gynec. & Obst.

Carson states that this operation is indicated in a great many cases and done in a very few, judging by the number of cases reported. The conditions demanding such an operation are:

1. Traumatism of the shoulder, including gunshot wounds.
2. Cases of extreme bone disease of the shoulder and upper arm.
3. All cases of sarcoma of the shoulder and arm, except possibly those of giant-celled sarcoma limited to the lower two thirds of the humerus.
4. All cases of carcinoma involving the upper half of the arm, and in some cases of carcinoma of the breast, where the axilla and arm are involved.
5. Some cases of tuberculosis.

Radical amputation should be insisted upon just as soon as a positive diagnosis of sarcoma is made.

Keen thinks it possible that when the disease has invaded the medullary canal, operation may already be too late on account of the physiological fact that the bone marrow has a share in the production of the red blood cells.

Notwithstanding the fact that the operation is a long and tedious one, the mortality is only about 4 per cent in tumor cases and 25 per cent in traumas. The chief dangers are due to hæmorrhage and shock. The hæmorrhage may be very materially limited by tying the axillary artery and vein, a procedure which is made comparatively easy by resecting a part or all of the clavicle as recommended by Le Conte. Carson does not think this procedure necessary unless the clavicle be diseased and states that in his experience the difficulties of the operation are very much lessened by first dividing the pectoral muscles from above downward as close as possible to their origin, for the reason that it is very easy to include the artery and vein in the clamps applied to the muscles, and afterwards resecting the middle third of the clavicle either without removing the periosteum, where the clavicle is not involved, or subperiosteally where the clavicle is involved. Having done this, the subclavius muscle and fascia covering the vessels and nerves should be carefully divided and drawn outward, thus fully exposing the vessels and nerves. The artery should be tied first, the limb elevated until it is blanched and the vein tied. By this procedure much blood is saved.

By blocking the nerves, shock may be lessened or even prevented in some, though not in all, cases, depending somewhat on the amount of hæmorrhage. Ether by the intratracheal insufflation method is the anæsthetic of choice since it seems to limit shock and diminish post-anæsthetic effects.

In traumatic cases infection plays a very important rôle, yet this is not necessarily a fatal complication since Treves operated on such a case on the battle-field and complete recovery resulted. The two cases reported by Carson — one with epithelioma following an old extensive burn of the arm; the other a round-celled sarcoma of the arm, probably arising from the periosteum — made good recoveries. If after these patients are up and about they complain of lopsidedness, an artificial shoulder and arm, properly fitted, will relieve this very annoying condition.

HARVEY B. MATTHEWS.

Sternberg: Indications and Technique for Artificial Pneumothorax in Pulmonary Tuberculosis (Zur Frage der Technik und Indikation des künstlichen Pneumothorax bei Lungentuberkulose). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh., St. Petersburg*, 1913, xx, 127.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author draws conclusions from forty-three cases treated by means of artificial pneumothorax. Puncture is to be preferred to open operation. The dangers of gas embolism can easily be overcome if manometer readings are carefully made. The advantages of puncture are less trauma and fewer

chances of infection, as well as a higher percentage of successful results. The author succeeded in producing pneumothorax in all his cases in spite of the ease with which the opening healed. Future inflations with gas must be governed strictly by the individual cases regarding the amount and the time intervals in order that the condition of the patient may not be seriously disturbed.

The author divides the indications into two groups. To the first belong cases of advanced unilateral involvement, which offer a poor prognosis, and above all those cases of diffuse unilateral aspiration pneumonia following hæmorrhage, and followed by high temperature with little tendency towards resolution. The second group constitutes a relative indication and consists of cases in which toxæmia has subsided but with marked unilateral anatomical changes, cases with small but rapidly advancing lesions and cases with brisk and frequent hæmorrhages. Contrary to Forlanini, the author does not consider the establishment of pneumothorax advisable in incipient cases of tuberculosis since these respond well to other methods of treatment and since the production of pneumothorax is usually followed by hypertrophy of the right heart. Pneumothorax is contraindicated in advanced bilateral cases and in those complicated by cardiac and renal conditions.

VON SCHILLING.

Sternberg: Artificial Pneumothorax for Pulmonary Hæmorrhage (Über künstlichen Pneumothorax bei Lungenblutungen). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh., St. Petersburg*, 1913, xxii, 34. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This is a report of two cases of pulmonary hæmorrhage with a hopeless prognosis. After a total injection of 1500 cc. of nitrogen, the hæmorrhage was controlled. The temperature fell from 39° C. to normal in a short time and the general condition was good.

VON SCHILLING.

PHARYNX AND ŒSOPHAGUS

Biggs: Cast of Epithelial Lining of the Œsophagus from a Case of Chloroform Poisoning. *Proc. Roy. Soc. Med.*, 1913, vi, Laryngol. Sect., 123.

By Surg., Gynec. & Obst.

The patient drank and vomited one ounce of chloroform. On the third day she vomited the cast. Treatment with bismuth carbonate, lanoline and paroline accompanied by rectal feeding was continued thirteen days. Œsophagoscopy three months later revealed no tendency of the œsophagus to contract.

EARLE B. FOWLER.

Torek: The First Successful Case of Resection of the Thoracic Portion of the Œsophagus for Carcinoma. *Surg., Gynec. & Obst.*, 1913, xvi, 614.

By Surg., Gynec. & Obst.

After reviewing the causes of failure in the operation for carcinoma of the œsophagus, Torek describes the method of operating by which he succeed-

ed in overcoming certain difficulties and avoiding certain dangers of intrathoracic resection of the œsophagus. He calls attention to Sauerbruch's view that only the carcinomata near the neck or near the cardia should be resected, and that the carcinomata in the middle portion should be left untouched. In contrast to this the author states that the carcinomata near the cardia are not only rarer than those in the middle portion but are also more frequently associated with inoperable metastases. The carcinomata in the middle portion therefore play a more important rôle in the problem of cancer of the œsophagus. Among the dangers of the operation were injury to the vagi and leakage from the oral stump of the œsophagus after resection.

The patient was a woman, 67 years old. The tumor was situated in the middle portion of the œsophagus, beginning just below the arch of the aorta and extending one and three fourth inches down. Gastrostomy had been performed some time previous; anæsthesia by tracheal insufflation was employed. An incision was made through the whole length of the seventh intercostal space, from the posterior end of which it was extended upward by cutting through the seventh, sixth, fifth and fourth ribs near their tubercles. This gave excellent access to the parts. Extensive adhesions between lung and parietal pleura were separated. The portion of the œsophagus below the tumor was lifted out of its bed after laying the vagi aside. Over the tumor the dissection of the vagi was more difficult, requiring

the division of some branches crossing it. During this procedure the pulse remained steady, between 93 and 96. The dissection of that part of the œsophagus which passed behind the arch of the aorta proved difficult. It was accomplished by dislodging the aorta after dividing a number of its thoracic branches.

The tumor was attached to the left bronchus which was cut during the process of separating the tumor from it. This was afterward sutured with silk. The dissection of the œsophagus was continued all the way up to the neck. It was divided with a cautery at a safe distance below the carcinoma after double ligation; the lower stump was invaginated and the upper brought out through an incision in the neck at the anterior border of the left sternocleidomastoid muscle. It was then placed under the skin of the chest, the cut end, after resection of the carcinoma, being sutured to an incision in the skin made for that purpose. Thus an infection of the pleura from the œsophagus was rendered impossible.

The thorax was closed without drainage. The patient made a good recovery. On the seventh day, when the last stitches were removed, the wound was completely closed. Feeding is done by introducing the upper end of a gastrostomy tube into the end of the œsophagus; when the patient swallows, the food passes through this tube into the stomach. There are several methods of œsophagoplasty that could be employed. The author urges early diagnosis and early operation.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Kustner: A Pedunculated Necrotic Tumor the Size of the Fist in the Region of the Umbilicus (Ein nekrotischer, über faustgrosser Tumor, welcher breit gestielt in der Gegend des Nabels sass). *Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A 34 year old multipara, who aborted a year previously, complained of pain in the right inguinal region. About a week later the skin in the region of the umbilicus ruptured and pus exuded. In a short time a pink tumor protruded, which later turned black.

Bimanual examination showed an empty pelvis and the uterus lying just behind the abdominal wall, which was densely infiltrated. Fever was present. The tumor was removed with a Paquelin cautery. The stalk consisted mostly of fibrous tissue and the tumor smooth muscle with some connective tissue. In two months the epithelium was entirely restored, and the infiltration of the abdominal wall disappeared. It was then discovered that the left border of the uterus was adherent to the abdominal wall in the region of the umbilicus. The histological findings as well as the fixation of the

uterus would speak more in favor of a subserous myoma of the uterus than a necrotic abdominal wall desmoid. It is not improbable that the stalk of the subserous polyp became twisted, the tumor becoming adherent to the wall of the abdomen in the umbilical region, where the rupture took place.

Machefer: Biliary Peritonitis without Perforation of the Bile Passages (Les peritonites biliaires sans perforation des voies biliaires). *Thèse de doct., Par., 1913.*
By Journal de Chirurgie.

This study is based on a personal case and on sixteen found in the literature. The author thinks the peritoneal effusion in those cases is really bile, though the macroscopical appearance is the only proof, as chemical examinations are either lacking or doubtful. He does not believe that the condition is an ordinary peritoneal collection discolored by bile resorption. The bile may reach the peritoneal cavity through an unrecognized perforation of a duodenal ulcer, through a perforation of the duodenum, the gall-bladder, or the bile ducts; or it may filter through the surface of the congested liver, or the walls of the gall-bladder. The latter is the hypothesis accepted by the author. The filtration is

supposed to take place either, through the hypertrophied mucous diverticula (canals of Luschka) or through abnormal lymphatic channels, or on account of chemical changes in the composition of the bile. Machefer agrees with authors who ascribe it to changes in the walls of the gall-bladder (sometimes caused by the Eberth bacillus), biliary hypertension due to blocking of the passages by calculi being a favoring, but not altogether necessary, factor. The real mechanism, which would account for the fact that the above-mentioned lesions are common while biliary peritonitis is so rare, is unknown.

The effusion contains, besides bile, a fluid exudate produced by the peritoneal reaction. According to the degree of septicity of the bile there is an acute peritonitis with little purulent fluid and few pseudomembranes, or a subacute peritonitis with a large amount of bile-colored serum. This effusion is always free; it collects at first on the right side; it may remain there, without any adhesions to confine it. It sometimes contains typhoid or colon bacilli.

The signs are those of a peritonitis. The onset is sudden. There is usually no jaundice as there is in biliary peritonitis following a perforation of the bile passages. The peritonitis is either acute with little effusion and a prompt fatal outcome, or subacute with a large effusion and attenuated symptoms. The prognosis is unfavorable. The diagnosis from appendicitis, peritonitis due to perforation of the bile channels and intestinal obstruction, is difficult.

The treatment is evacuation of the collection followed by cholecystectomy, or cholecystostomy when the common duct is occluded or obstructed. The post-operative treatment is that of all cases of peritonitis.

L. HOUDARD.

Clairmont and Von Haberer: Remarks on the Contribution of Prof. Nauwerck and Dr. Lübke: Does a Biliary Peritonitis Exist Without Perforation of the Bile Passages? (Bemerkungen zu der Arbeit von Prof. Nauwerck und Dr. Lübke: Gibt es eine gallige Peritonitis ohne Perforation der Gallenwege?) *Wien. klin. Wchnschr.*, 1913, xxvi, 891.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors reported a case of biliary peritonitis without perforation of the biliary passages, in which also the pathologist was unable macroscopically to find any perforation or even a suspicious area. Contrary to the views of Nauwerck and Lübke who consider a perforation of the bile passages as always necessary for the formation of a biliary peritonitis, the authors on the basis of the published cases come to the conclusion that the following pathological and anatomical findings are the basis of biliary peritonitis without perforation: 1. A slit-like perforation demonstrable only at autopsy is present. 2. A primary thinning of the wall (microscopically demonstrable) exists through which in all probability the bile has exuded. 3. On account of dilation of the subserous bile passages of the liver a small per-

foration has probably resulted. 4. In other cases a perforation may not be demonstrable even at autopsy, but an abnormal permeability of the walls to bile is present as in the case reported. In all these conditions the same clinical picture prevails at operation: the surgeon is unable to find the place of exit of the bile and attack it surgically.

UNTER ECKER.

Baradulin: Pneumococcic Peritonitis (Zur Frage der Pneumokokkenperitonitis). *Chirurgia*, 1913, xxxiii, 527.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In 1911, Rohr collected 189 cases of pneumococcic peritonitis from the literature. In Russia the cases have but rarely been observed and described. The author reports two cases operated upon successfully. The first patient was a girl six years old, who became ill two weeks previously with abdominal symptoms. In the left hypochondrium a fluctuating swelling developed. At the operation, after opening the peritoneal cavity, about three glasses of greenish-yellow pus were evacuated. The cavity was then tamponed. A cure resulted. The second case was a boy fourteen years old, who became ill with similar symptoms. Here also an encapsulated accumulation of pus developed, which was drained by laparotomy, and the cavity tamponed. The patient recovered.

In both cases the bacteriological examination of the pus showed a pure culture of pneumococci. The ways by which pneumococci enter the abdominal cavity are variable. In pleuroitis the pneumococci enter through the diaphragm. Pathologically and clinically two large types can be differentiated: The localized and the general or diffuse. The localized form offers a decidedly better prognosis. Both of the author's cases belong to this group. The diagnosis of a pneumococcic peritonitis is very difficult, as only general peritonitic symptoms appear. Rohr's statistics show 86.3 per cent recovery for the localized form and only 10.68 per cent for the diffuse form. The treatment, of course, must be operative and at the earliest possible moment.

SCHAAK.

Wendel: Retrograde Incarceration; "Hernia en W" (Die retrograde Incarceration; Hernie en W). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 536.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Under retrograde incarceration and "hernia en W" have been described cases in which a beginning or complete gangrene of a loop of bowel not lying within the hernial sac has occurred, the contents of the sac being entirely normal. Both terms are however not synonymous; a "hernia en W" can occur without incarceration and a retrograde incarceration can occur also in other hernias. In retrograde to incarceration of free end organs as the appendix, tube, omentum and ovary, the relations are very simple if the gangrene is easily explained as being due to partial or complete constriction of the vessels leading from the abdominal end of the organ. The condition is different, however, in the case of the bowel.

The author has collected 78 cases from the literature and comes to the following conclusions: Retrograde incarceration occurs most commonly in old people with old and large hernias. The contents of the hernia may consist of one to three separate loops of bowel, or of mesentery alone. The loops are usually incarcerated but not always. The connecting loop may be intact although the herniated loops may be incarcerated. Frequently the hernial loop is much altered and gangrene usually sets in remarkably early. The mesentery of the connecting loop may be incarcerated in the hernia or not. Even when it is not incarcerated it may show marked vascular changes which are sharply limited and may form an arcade-like figure. The genesis of "hernia en W" therefore is not identical with the genesis of retrograde incarceration. The gangrene or the nutritional disturbance of the connecting loop is due either to an incarceration of the mesentery or a compression of the same on account of tension and traction; possibly also on account of kinking of the distended connecting loop. The distention and fecal stasis with its bacterial and mechanical disturbances also can aid in the production of gangrene of the connecting loop. The author advises combining the two conditions described as "retrograde incarceration" and "hernia en W" under the term "retrograde incarceration," limiting it only to conditions in which during a hernia that loop of bowel continuous with the herniated loop shows decided nutritional disturbances, the explanation of which must be sought in the hernial relations and not purely abdominal causes.

The author then discusses the diagnosis, prognosis and treatment. He advises risking a resection rather than an enterostomy.

OEHLER.

Swetschnikow: A Case of Spontaneously Incarcerated Diaphragmatic Hernia of the Stomach, the Spleen and a Loop of Bowel (Ein Fall von spontan incarcerierter diaphragmaler Hernie des Magens, der Milz und einer Darmschlinge). *Morskoj vrach*, 1913, April, 217.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A healthy young Austrian sailor twenty-four years old, while performing some labor, was taken ill with severe pains in the epigastrium: Vomiting set in shortly after and was repeated during the next few days. The epigastrium was sensitive to pressure and rigid. During the next two days the objective findings increased. The patient passed flatus and fecal matter. Pulse 64. The tongue was moist but coated. On the third day after the onset, cyanosis of the head was present, especially of the ears. The pulse was hardly palpable on the left side; on the right it was weak, 135 per minute. The patient complained of pains in the epigastrium, especially during deep expiration. No vomiting or singultus, but marked meteorism in the upper abdomen, of the left flexure of the colon, transverse colon, ascending colon and right iliac fossa was present. The left iliac fossa was sunken and dull, whereas the other

parts were tympanitic over the lower portions of the left lung a tympanitic sound was heard, gradually merging into the stomach tympany. The abdomen was highly sensitive, rigidity marked, tongue moist and clear.

After the administration of high enemas of oil and seltzer water, a little fecal matter and much foul gas were expelled. The subjective condition improved, the meteorism decreased. The rigidity disappeared over the entire abdomen except in the epigastrium. Pulse 90. Cyanosis much less. The operation was therefore postponed. On the following day the cyanosis of the face and ears returned. Pulse 120. The abdomen was not distended or sensitive. Edge of the liver became palpable; it was soft and not sensitive. Cardiac tones clear and in normal location. The tympany over the lower edge of the left lung less marked. No vomiting, but the patient regurgitated everything that he swallowed. After another high enema some gas was expelled. The patient passed a good night. The abdomen next morning was soft and insensitive. The liver was markedly enlarged, but not sensitive. The epigastrium was not distended, but was sensitive. A swelling was observed over the 3-4 rib, internal to the left mammary line. Tympany was definite over the lower border of both lungs, more marked on left side. Cardiac dullness not definite and the impulse was absent. The patient could lie only on the left side, and regurgitated everything he swallowed. By evening the heart was pushed further to the right. The left half of the thorax was tympanitic; posteriorly the falling drop sound could be heard. Hippocratic succussion could be elicited.

A diagnosis of diaphragmatic hernia was made and the operation performed by Gerulanos. The stomach was absent from the abdominal cavity. The diaphragm on the left side was found bulging into the abdomen and tense. The edges of a tear could be palpated as firm tense bands. The abdominal incision was enlarged transversely, and the stomach punctured through the diaphragm. It became possible to introduce two fingers into the diaphragmatic wound and enlarge it. The stomach filled the entire left thoracic cavity to the second rib; adhesions had formed between it and the pleura and could not be replaced. Following a further enlargement of the diaphragm-opening the heart ceased to beat and respiration stopped. It was impossible to revive the patient. Only with difficulty was it possible to separate the stomach from its adhesions. A loop of bowel was first brought out, then the spleen, and finally the gangrenous stomach.

Important points in the differential diagnosis from other incarcerations are the cyanosis, the unequal radial pulse, the clean moist tongue, the regurgitation of the small amount of fluid without any attempts at vomiting, the tympany over the lower portions of the lungs and the displacement of the heart.

HOLBECK.

Schmidt: The Radical Operation for Intestinal Hernia with Incomplete Hernial Sac; Sliding Hernia (Zur Radikaloperation der Darmbrüche mit inkomplettem Bruchsack; Darmgleitbrüche). *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 266.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Schmidt reports the history of three interesting cases observed and operated by him. He then discusses the work of Sprengel, Finsterer and Sudeck, as well as the anatomy and operative technique of these herniæ. From the results of his work he concludes that in a sliding hernia of the colon on the right side, a one-angled loop of colon is involved, whereas on the left side a two-angled loop enters into the hernia. In opening a sliding hernia extreme care must be employed, so as not to open the bowel. The reposition of such a sliding hernia must be accomplished by inversion, which is illustrated by drawings.

Superfluous parts of the free hernial sac are to be removed, but one must be careful not to divide the blood-vessels supplying the bowel. Before severing the sac it is held against the light to see if it is empty. In general its anterior and inner surface may be removed without danger, as the bowel and vessels lie posteriorly and laterally. If reposition is difficult the abdominal wall may be split in the angle of the outer part of the ring. If the spermatic cord is closely adherent to the sac it is advisable to implant the testicle into the abdomen rather than to castrate.

VON TAPPEINER.

Tate: Sarcoma of the Omentum. *Am. J. Obst., N. Y.*, 1913, lxvii, 1142.
By Surg., Gynec. & Obst.

Tate reports a case of sarcoma of the omentum and tabulates 22 cases which he finds in the literature to date. His patient was a male, 32 years of age, who had a left inguinal hernia for years which had required the use of a truss. The rupture had occasioned no particular discomfort until three months previously, when it had begun to produce some pain. In the few weeks prior to operation the hernial mass had started to increase in size, so that for these two reasons the patient was operated. At operation the mass was the size of a cocoanut and was composed of omentum in which was embedded the testicle and cord. There was also a considerable amount of paraffin in the sac which had been injected two years previously by some one for the attempted cure of the hernia. The mass with testicle and paraffin were removed and the hernia repaired. The microscope showed the mass to be a round-celled sarcoma of the omentum, while the testicle was normal. The patient was seen 18 months later and had a large secondary growth in the abdomen, but refused further operative attention.

N. SPROAT HEANEY.

Benedict: Chylous Cyst of the Mesentery. *Surg., Gynec. & Obst.*, 1913, xvi, 606.

By Surg., Gynec. & Obst.

The author supplements Friend's list of 53 cases in the issue of the same journal for July, 1912.

Excluding duplicates, the list is brought up to 96 cases although Benedict had previously excluded four in Friend's list as probably pseudo-chylous and thinks that a few more may be so or that duplications may exist on account of listing under different names. He carries the literature back to Poncy, Jr., 1699, and adds four other cases antedating Rokitsky's report of 1842, commonly regarded as the beginning of the history of this condition. There seems to be no sex or age predilection and the prognosis is surprisingly good: 60 recoveries, 14 deaths, 10 unspecified results after operation and 12 cases diagnosed at necropsy, some of the last having lived for years with the tumor.

Aspiration was performed in 5 cases; drainage, mainly after preliminary incision in 24, some form of enucleation or resection in 31; and marsupialization in 4. The result appeared to depend not on the method of operation, but upon the condition of the patient, i. e., whether he had an occlusion of bowel, peritonitis, sepsis, etc.

Drummond: The Surgical Aspects of Persistent Meckel's Diverticulum. *Surg., Gynec. & Obst.*, 1913, xvi, 656.
By Surg., Gynec. & Obst.

The paper is based upon a review of the surgical records of the Royal Victoria Infirmary, Newcastle-upon-Tyne, extending over a period of twelve years.

There were twenty-two cases of acute abdominal disease resulting from a persistent Meckel's diverticulum, seven of which became inverted into the small intestine and produced intussusception — making 7 per cent of all the cases of intussusception from January, 1900, to June, 1912. Intestinal obstruction due to acquired adhesions occurred in 6 cases. In two cases there was strangulation of the small intestine over the diverticulum, which was adherent to the umbilicus. In another case in which the diverticulum adhered to the umbilicus, a secondary volvulus of the lower ilium, cæcum and ascending colon occurred. In the remaining six cases there was evidence of inflammatory change in the diverticula.

An attempt is made to show that, speaking generally, a certain type of diverticulum is responsible for a definite and specific lesion. A Meckel's diverticulum of unusual length (6 or 8 inches) in addition to causing intestinal obstruction may be inflamed or strangulated as the result of interference with its blood supply by a loop of implicated small intestine. Diverticula adherent to the umbilicus may cause strangulation of the small intestine, or produce a secondary volvulus. The small cone-shaped diverticula become inverted into the bowel and produce intussusception.

The lesions are considered under three headings; viz., obstruction, inflammatory conditions and more rare forms such as enterocysts, calculi, etc., though not infrequently the pathological condition cannot be classed under one of these headings. One case is recorded of an intestinal obstruction, gangrene of the Meckel's diverticulum and a calculus.

In dealing with the differential diagnosis of the lesions produced by Meckel's diverticulum, appendicitis is stated to be the most frequent source of error. The reason that lesions of Meckel's diverticulum are confounded with appendicitis is that both organs are capable of undergoing the same pathological changes; e.g., peritonitis, obstruction, inversion, harboring of calculi, etc. Other lesions, such as pathological conditions of the gall-bladder and intestine may be confounded with Meckelitis.

GASTRO-INTESTINAL TRACT

Borchgrevink: Acute Dilatation of the Stomach and Its Treatment. *Surg., Gynec. & Obst.*, 1913, xvi, 662. By Surg., Gynec. & Obst.

The author reports five cases successfully treated by abdominal posture. He thereupon gives a review of 137 cases published since Schnitzler's introduction of the postural treatment in 1895. Of thirty-one cases not treated or medically only, twenty-nine died. Of 48 cases, treated by stomach tube, 24 recovered. Of 23 operated cases, 5 survived, 1 after gastro-jejunostomy, 1 after gastrostomy and 3 after their non-incised stomachs had been emptied during laparotomy. Of 26 cases treated by abdominal posture, 2 died, one from the gastric dilatation and one after the condition had been cured by the postural treatment. In two of the cured cases, the abdominal position was little used and seemed to be without effect. In the other 22 cured cases, the abdominal posture more often in the presence of threatening symptoms, and partly, when longer treatment by the stomach tube had been without result, has brought about a noticeable and often a surprising effect. In three cases, which were laid on the right side, the effect was excellent. Lying on the left side did not have any decided effect.

Considering the etiology of acute gastric dilatation, Borchgrevink draws the following conclusions, which are based partly on the good results obtained by abdominal posture. 1. The dilatation primarily occurs as a sequel of overloading of the stomach, either by excess in food or fluids, or by stagnation of the contents of the stomach and following gastric hypersecretion. 2. The dilated stomach produces the arterio-mesenteric occlusion of the duodenum as it compresses and empties the small intestine, and, increasing in size, pushes it into the pelvis, thus tightening the root of the mesentery. 3. By abdominal posture the arterio-mesenteric compression is relieved and the stomach allowed to empty its contents into the bowel.

Heyrovsky: Histological Examination of the Mucosa in Ulcer and Carcinoma of the Stomach (Histologische Untersuchungen der Magenschleimhaut bei Ulcus ventriculi und Carcinom). *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 359.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Detailed examinations in 120 cases gave the following results: In more than half a decided gastri-

tis was found. In gastric ulcer accompanied by gastritis no definite cause for the latter was made out. No change in the fundus glands, characteristic of hypersecretion and hyperacidity was demonstrated. The follicular erosions found commonly in ulcer probably are important in the formation of ulcer. The ulcer patients with gastritis after an anastomosis had more gastric disturbances than those without a gastritis. The staining technique and the literature on the subject are appended. THIEMANN.

Grüber: The Relations between Carcinoma and Peptic Ulcer on the Upper Digestive Tract (Beitrag zur Frage nach den Beziehungen zwischen Krebs und peptischem Geschwür im oberen Digestionstrakt). *Ztschr. f. Krebsforsch.*, 1913, xiii, 105. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The article contains the statistical investigations on the results of about ten thousand post-mortems in regard to the frequency of peptic ulcer of the œsophagus, stomach and duodenum on the one hand, and carcinoma on the other. Furthermore, it gives a detailed description of the microscopical and macroscopical findings of several interesting cases, with a thorough discussion. The author comes to the conclusion that the statistical findings at post-mortem show absolutely no point in favor of the contention that carcinoma develops particularly on the basis of a peptic ulcer. The views of Payr and Küttner based particularly upon surgical material are criticized as lacking convincing proof. The histological proof of the development of carcinoma on the basis of ulcer, according to the author, is found only rarely. The clinical as well as the anatomical methods of investigations cannot feasibly be employed, as correct statistical information is not available. MEYER.

Seidel: The Perforated Gastric Ulcer (Über das perforierte Magengeschwür). *Zentralbl. f. Chir.*, 1913, xl, 910. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Seidel reports twenty-five cases of perforated gastric ulcers which were operated upon with a mortality of 28 per cent. It is most important to close the perforation perfectly and this is effected in the best way by placing auxiliary sutures parallel to the border of the perforation. On these auxiliary sutures the real closing sutures find a secure hold. Gastro-enterostomy was as a rule not added (only in one case); it offers, when performed later on, much better prospect for a good healing. KINDL.

Palfrey: The Administration of Ox Bile in the Treatment of Hyperacidity and of Gastric and Duodenal Ulcer. *Am. J. Med. Sc.*, 1913, cxlv, 796. By Surg., Gynec. & Obst.

This report embodies the results of treatment of fifty cases of the most common form of dyspepsia characterized by "sour stomach," "heart burn," or pain after eating. A review of the physiology of the pylorus shows that the control of the pyloric

sphincter depends upon the degree of alkalinity and acidity in the duodenum. When the duodenal contents are alkaline the pylorus opens, when they are acid it closes. No degree of acidity on the gastric side can cause the pylorus to open.

According to Pilcher, the acid contents of the duodenum are neutralized by the bile and pancreatic juice as well as by the duodenal secretion.

This action may be enhanced by the administration of ox bile per os.

The bile pills are prepared after the directions of Pfaff, each pill containing 0.25 gram of dried ox bile and coated with solol to conceal taste and prevent dissolution in the stomach. Two or three pills are given three times a day for a week; the number is then reduced.

As the author states, this report is preliminary, but the results obtained in fifty cases are worth reporting.

H. A. POTTS.

Mayo: Palliative Operations for the Relief of Incurable Carcinoma of the Stomach. *St. Paul M. J.*, 1913, xv, 269. By Surg., Gynec. & Obst.

A high percentage of individuals with cancer are incurable when they present themselves for examination and only in a certain percentage is a palliative operation indicated. In performing a palliative operation the surgeon assumes a great responsibility. He must be quite sure that the palliation will be sufficient to repay the patient for the expense and suffering and for time spent in the hospital, and he should take into consideration that in the background is an unenlightened public opinion to be influenced by success or failure. Palliative operations are indicated for the relief of one or more of several conditions which may develop in the gastro-intestinal tract, the most common of which is obstruction. A differential diagnosis cannot always be made between malignant and benign ulcerations unless a specimen be removed for microscopic examination. Moreover, when a specimen is obtained for examination it may be taken from a point near but not actually a part of the disease and thus give an incorrect version of the pathology. If a specimen cannot be obtained and a diagnosis is made on the clinical findings only, the patient should be given the benefit of the doubt and the condition treated as though it were benign.

Twenty-two patients who recovered from a palliative operation performed in the clinic for clinical or doubtful cancer of the stomach, and whose after-history was traced, lived more than one year. Fifty per cent lived from one to five years; the others died supposedly from malignant disease. Cancer in the vicinity of the cardia, producing obstruction, occurs in about 10 per cent of the cases of gastric cancer. Gastrostomy is a useful means of palliation in these cases and should not be delayed to the last resort. The Witzel method of operation is ordinarily performed, but the Stamm-Kader technique is equally effective. A number 16 English catheter is used. Gastro-enterostomy is a

satisfactory palliative procedure in cases of inoperable malignant obstructions of the pylorus and for those cases having huge excavations in the posterior wall of the stomach which are usually carcinomatous but occasionally benign. If the tumor be large and more or less fixed, as it usually is in inoperable cases, anterior gastro-enterostomy after the Wolfer-Hartmann method gives excellent results. The posterior method is used for less extensive growths and in cases in which the clinical diagnosis between cancer and ulcer is questionable. Jejunostomy is especially useful in cases of extensive involvement when a doubt as to the diagnosis exists. It is also useful in cases of accidental perforation of the ulcer. The gastric tumor should be removed even though all of the glands cannot be extirpated. It gives longer and more comfortable existence to the patient.

Clement: Occlusion in a Bilocular Stomach (Occlusion aigue dans un estomac biloculaire). *Marseille méd.*, 1913, iv, 248. By Journal de Chirurgie.

The woman, 32 years old, entered the hospital with cyanosis, breathing irregularly and vomiting a greenish bile-stained liquid continuously. This condition had lasted fifteen days and began very suddenly. On examination the abdomen was found to be distended and tympanitic, especially in the upper part. A solid immobile mass was palpated in the left hypochondrium, which did not correspond to any organ.

On opening the abdomen an enormously distended stomach came into view; it was so distended that the wall was transparent. Examination disclosed a bilocular stomach, the opening between the two parts being so narrow that fluid could not pass. A gastro-enterostomy was performed and an adhesion to the ilium freed. The patient died six hours later. At autopsy there were no signs of ulcer, active or healed, or of new growths about the stomach.

The absence of scars made it seem that the constriction must have been either a congenital affair or due to very early ingestion of some caustic. On account of the condition of the patient it was impossible to get a history of any previous attacks. The author believes that the trouble of fifteen days duration must have been due to a spasm from a long standing hyperchlorhydria or from a lesion in the innervation of the stomach. Such cases are very rare and the diagnosis from intestinal obstruction high up is hard to make.

J. DUMONT.

Balfour: Anterior Gastro-Enterostomy. *Ann. Surg., Phila.*, 1913, lvii, 902.

By Surg., Gynec. & Obst.

It is generally conceded that when a gastro-enterostomy is indicated, the posterior no-loop operation is safer, gives the best end-results, and that it carries practically no risks of unfortunate mechanical sequelæ. The method has been so consistently satisfactory that it may have been used at times when other methods would have sufficed as well or

perhaps better. It is particularly applicable for benign lesions in the region of the pylorus when a resection of the pyloric end of the stomach is not indicated or a plastic operation is not possible.

For various reasons an anterior gastro-enterostomy is the operation of choice in certain definite groups of cases, the largest of which is composed of the obstructions of the pylorus due to carcinoma in which a resection of the growth is not feasible. In many of these cases the mechanical obstruction with its retention of decomposed food products and the starvation is the important factor. Not only are these patients greatly relieved temporarily by drainage of the stomach but the terminal stages of the malignancy are much less pitiable. It is particularly in this type of case that the anterior method is preferable on account of the speed, safety and simplicity with which it can be performed. A smaller group is composed of certain benign lesions at or near the pylorus where a posterior gastro-enterostomy would be desirable but not possible because of the presence of some mechanical condition. Extensive adhesions, congenital or inflammatory, malformations, etc., may be sufficient to preclude the advisability of attempting the posterior method, and yet permit the anterior operation to be done safely and quickly.

Goullioud: Simultaneous Resection of the Stomach and Transverse Colon; Five Cases (*Réséction simultanée de l'estomac et du colon transverse; 5 observations*). *Lyon chir.*, 1913, ix, 475.
By Journal de Chirurgie.

The nearness of the colon to the stomach makes it possible for new growths of one organ to invade the other and so make resection of both necessary. Leriche has collected thirty-two such cases, with ten deaths. The author had but one operative fatality in his five cases. He removed the tumor of the stomach and colon in one mass and then made a gastro-duodenostomy and lateral anastomosis of the colon.

In one case there was a myosarcoma of the stomach invading the meso-colon so that it could not be removed without destroying the blood supply of the colon. The tumor, with parts of the stomach and 30 cm. of the colon was removed and the continuity of the gastro-intestinal canal brought about as described above. The patient died of pneumonia eight days later.

In the second case a cancer of the stomach was resected with some of the colon, a gastro-duodenostomy and a lateral anastomosis of the colon performed. The patient died eleven months later of recurrence in the pleura and supraclavicular lymph glands. In the third case 16 cm. of the stomach and 25 cm. of the transverse colon were resected for an abscess about a gastric ulcer in a woman 62 years old. The patient recovered and was in good health fifteen months later.

In the fourth case the cancer of the colon was resected and twenty months later it was necessary to resect 15 cm. of the pyloric part of the stomach

and 12 cm. of the intestine. The patient recovered and was in good health nine months later, three years after the first operation. In a second case of a woman 53 years old who had had painful attacks for fifteen months, a cancer of the colon and stomach was resected *en masse* and the patient was in good health six years and three months after the operation.

CH. LENORMANT.

Momburg: Lacing and Closing of the Pylorus with Omentum (*Umschnürung und Verschluss des Pylorus durch Netz*). *Deutsche med. Wchnschr.*, 1913, xxxix, 1096.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In operating on his last two cases of duodenal ulcers Momburg proceeded in the following way: He first closed the pylorus with a silk ligature; in the furrow thus formed he pulled a piece of the omentum behind the pylorus upwards placing it around the pylorus. He fastened this omental ring with two or three sutures.

One of the patients died five days after the operation from pneumonia and at the autopsy it was found that the omental ring closed the pylorus perfectly and tightly. Momburg believes that the omentum alone will hold the pylorus closed after the silk thread ligature has been cut.

KOLB.

Haenel: Duodenal Ulcer (*Über das Ulcus duodeni*). *Zentralbl. f. Chir.*, 1913, xl, 912.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the symptoms and diagnosis of duodenal ulcer. He believes that operation is indicated in the early stages of the duodenal ulcer, when all internal therapeutic measures fail; operation is further indicated in hæmorrhages, symptoms of stenosis, and, above all, in perforation of the ulcer, which is the most dangerous complication and occurs in about fifty per cent of all cases. The direct method of operation consists in the excision of the duodenal ulcer, invagination and suture, but has the disadvantage, that the cause of the evil, i. e., the influence of the gastric juice upon the duodenal wall, is not eliminated and new ulcers may form. According to the author the method of choice is the gastro-enterostomia retrocolica posterior with closure of the pylorus.

Haenel has performed gastro-enterostomy nineteen times in twenty-six cases of duodenal ulcer during the last eight years (in five cases with closure of the pylorus). Twice he excised the ulcer and in one case added gastro-enterostomia retrocolica posterior. In five cases of perforation the ulcer was sutured four times. Two patients with perforated ulcer died.

HARF.

Berard and Alamartine: Accidents and Technique of Jejunostomy (*Accidents et technique de la jéjunostomie*). *Rev. de chir.*, 1913, xlvii, 660.

By Journal de Chirurgie.

The authors report the case of a man 50 years old suffering from a diffuse cancer of the stomach with

reflex œsophageal dysphagia. A jejunostomy was performed according to the technique of Witzel-Eiselsberg. As the patient was normal for the first three days and the œsophageal spasm had ceased, he was allowed fluids by mouth. On the fourth day the abdomen became tense and there were colicky pains but no vomiting; the patient became rapidly worse and died that evening. At autopsy, a sharp kink was found in the jejunum and the jejunum and duodenum proximal to the jejunostomy were dilated. Liquids passed readily as soon as the mouth of the jejunostomy was freed.

To avoid a recurrence of this accident a jejunostomy in omega (Albert and Mayo-Robson) is now practiced. They searched the literature to find the technique of a jejunostomy which most closely fitted the following requirements: it must be simple and rapid as the patient is usually cachectic; the opening must be continuous and readily closable; finally there must be no danger of obstructing the intestine.

The method of Albert and Mayo-Robson with a lateral or button anastomosis of Jaboulay-Lumiere appeared to be the best.

The authors advise local anæsthesia preceded by the injection of scopolamine and morphine. A median or lateral oblique subumbilical incision is made, and anastomosis without sutures using the Jaboulay-Lumiere button is performed. A lateral jejunostomy is then made at the middle of the loop according to Toutan.

J. OKINCZYC.

Viguiér: 1. Volvulus of the Cæcum, Ascending Colon and Initial Portion of the Transverse Colon; Death from Intestinal Hæmorrhage. 2. Volvulus of the Pelvic Colon Treated by Simple Untwisting; Recurrence, Resection of the Affected Loop; Cure (Volvulus du cæcum du colon ascendant, y compris l'angle hépatique, et de l'origine du colon transverse; mort par entérorragie. Volvulus du colon pelvien, traité par la détorsion simple; récidence vingt mois après; résection de l'anse colique; guérison). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, xxii, 952.

By Journal de Chirurgie.

Viguiér's first case was that of a soldier, 25 years old, who was suddenly seized with violent pain above and to the right of the navel, accompanied by vomiting. Next morning, the vomitus was brownish, the paroxysmal pain remained in the same point, the abdomen was distended, the pulse 130 and thread-like. Neither gases nor stool had been passed during the night. Immediate laparotomy, 17 hours after the onset of the symptoms, showed a volvulus of the cæcum and whole ascending colon which dragged with them the terminal portion of the small intestine and the hepatic flexure and initial portion of the transverse colon. The torsion was complete (360°) and clockwise. Untwisting and restoring the gut to its normal position led to a partial emptying of the incarcerated gas and fecal matter, but the patient died on the operating table.

At autopsy the mucosa, from the duodeno-jejunal angle downward, was studded with minute

hæmorrhagic spots, which became larger and more marked as one came nearer the large intestine, so that in the terminal portion of the ileum the mucosa was intensely congested, dark purple with black patches. These lesions stopped abruptly at the site of the torsion where the mucosa resumed its normal appearance. The cause of death was intestinal hæmorrhage, the twisting of the mesenteric vessels having resulted in a huge hæmorrhagic infarct in almost the whole of the gut.

In the second case, that of a woman 42 years old, the first attack of volvulus of the pelvic colon was treated by laparotomy, puncture of the gut with a trocar to do away with the enormous distention and untwisting. The torsion was at least twice 360° and reversely clockwise. Recovery was uneventful, but 20 months later there was a recurrence, less severe than the first attack. The torsion was only 180° and in the same direction as formerly. Resection and end to end suture brought about a cure.

The author, whose opinion is concurred in by LEJARS, thinks that resection, preferably in the interval, or at the time, of the operation for obstruction, if the general condition of the patient permits, is the only radical treatment; untwisting leads to recurrence and anchoring of the loop yields only poor results.

HARTMANN quotes a case with multiple recurrences, finally cured by resection.

DELBET has operated on two cases of volvulus of the large intestine, one in a child 7 years old. Untwisting was immediately followed by an extremely copious evacuation, but death occurred in a few hours. The second, in a man 50 years old, was treated by untwisting and anchorage. The man recovered but could not be followed.

ROBERT once reduced a volvulus very easily, but the gut was already markedly altered at the point of torsion and leakage caused death. Resection would have been the correct procedure in this case.

SOULIGOUX has recently treated a volvulus by simple untwisting; the general condition was such that nothing more would have been possible.

TUFFIER has seen a case where, after multiple recurrences yielding to non-operative treatment, an artificial anus had to be made during a more severe attack. The patient died in a few hours.

SAVARIAUD has seen six cases of acute volvulus of the small intestine, all ending fatally. He noted also a case of chronic volvulus of the large bowel in which simple untwisting brought about recovery, but since the first attack, recurrences have twice necessitated surgical interference.

J. DUMONT.

Kellogg: Incompetency of the Ileocecal Valve; Disorders Arising from this Condition and Their Treatment. *Med. Rec.*, 1913, lxxxiii, 1105.

By Surg., Gynec. & Obst.

The study of the ileocecal valve and its disorders has been greatly neglected. The author studied sixty cases, and the most common symptoms were constipation, marked gastric pain, obstinate indi-

gestion, flatulence, etc. A large percentage showed evidence of appendicitis, colitis, mental and nervous depression.

The treatment is divided into the palliative and the operative. The former consists in securing at least three bowel movements daily and in changing the intestinal flora by administering cultures of several varieties of bacteria (*B. bulgaricus*, *B. bifidus* and *B. glucobacter*). The increased bowel activity is obtained by bulky laxative diet with the addition of agar-agar and paraffin oil if necessary; gymnastics, outdoor life, cold bathing, etc., all assist. The results have been most satisfactory, and the operative procedure has been resorted to only when it was necessary to enter the abdomen for some other pathological condition.

The operation consists in restoring to normal the partial intussusception of the small bowel into the cæcum. This is easily done by pushing the small intestine into the cæcum for a short distance and fixing it by a couple of sutures passed through the outer coats of the gut and it is often best to narrow the aperture between the lips of the valve by constricting the outer layers of the gut with a suture or two. The competency of the valve is then tested.

J. H. SKILES.

Obál: Primary Typhlitis (Primäre Typhlitis). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 201.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The cæcum used to be looked upon as the seat of origin for all inflammatory processes occurring in the ileo-cæcal region. At present there is a difference of opinion as to whether such a condition as primary typhlitis occurs at all. The author reports a case from the surgical clinic of the University of Budapest which is an undoubted example of typhlitis without appendicitis. The patient was a young man with an abscess in the ileo-cæcal region. Operation revealed a large perforated ulcer in the anterior surface of the cæcum, though the appendix was perfectly normal. These observations were confirmed by microscopical examinations of sections of the ulcerated area as well as of the appendix. The possibility of specific disease, as typhoid or tuberculosis, were carefully excluded.

With this case and the observations of other authors to support his views, the author concludes that primary typhlitis certainly does occur. It can hardly be differentiated, however, from the much more frequently occurring appendicitis. The infection arises from the faecal contents of the bowel. Congenital and acquired changes of the cæcum are to a certain degree predisposing factors. DENCKS.

Sonnenburg: Pathology and Therapy of Perityphlitis (Pathologie und Therapie der Perityphlitis). Leipzig: Vogel, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Sonnenburg's new book is thoroughly revised and all extraneous matter excluded. In regard to appendicitis the entire treatment is concise and

thorough. Sonnenburg's personal note on the value of the blood-picture with all its consequences is clear and concise. In this connection he states: "We possess to-day sufficient diagnostic aids to make a diagnosis and render a prognosis and to differentiate the cases (especially in the acute stage to differentiate the mild from the severe cases). The proper interpretation of the blood-picture is often the deciding factor for action, as it shows us the virulence of the infection and the involvement of the peritoneum in the individual case." In another place he continues: "As long as in an acute attack of appendicitis, the peritoneum is not involved and the inflammatory condition, usually catarrhal in nature, is confined to the lumen of the appendix and probably associated with an enteritis or colitis, so long is there no reason to treat this condition differently from the way in which the same condition in other parts of the intestinal tract would be treated, i. e., with laxatives." VERTH.

Lardennois and Okinczyc: The "Y" Cæco-sigmoidostomy (La typhlo-sigmoidostomie en Y) *J. de chir.*, 1913, x, 538. By Surg., Gynec. & Obst.

The authors present the following procedure as a more logical, a technically simpler and a more efficacious method of "short circuiting" the large intestine for grave chronic obstruction or rebellious

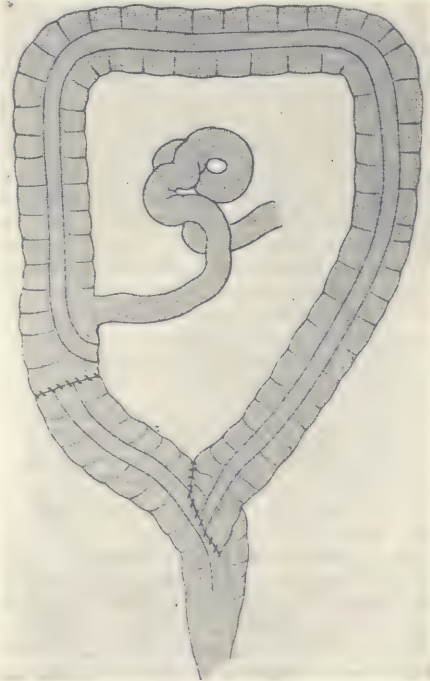


Fig. 1. Showing result to be avoided. The Y is inverted due to the excessive length of the sigmo-sigmoid segment. The section of the colon has been made too low and the two anastomoses are too close together.



Fig. 2. Approximation of the sigmoid to the cæcum. The cæcum has not yet been resected. The end of the sigmoid has been freshened by cutting with scissors below the occluding clamp.

colitis. After various experiments in cæco-sigmoidostomies, the authors finally arrived at the following perfected operation:

The patient is placed in the Trendelenburg position and a long median incision is made from the pubes to the umbilicus. The colon is rapidly explored for the clinical lesions and the termination of the small intestine inspected for the only possible contra-indications to this operation — namely, a stenosing band across the ileum.

1st Step. The cæcum and sigmoid flexure are brought well up into the wound. This is easily accomplished as lesions for which the operation is indicated are usually accompanied by a mobile cæcum.

2nd Step. This consists in the approximation of the mesenteries and the closure of the button-hole formed by the mesentery, the posterior parietal peritoneum and the pelvic mesocolon. This is done following Lane's technique: Beginning with the right surface of the mesocolon, a suture is "run" from the sigmoid to the posterior parietal peritoneum at the sacral promontory and thence to the left surface of the mesentery close to its termination. Great care is exercised to avoid blood-vessels. The two ends of the suture are held in a clamp and are not tied until the anastomosis is completed.

3rd Step. Appendectomy is performed quickly as the appendix interferes with the anastomosis.

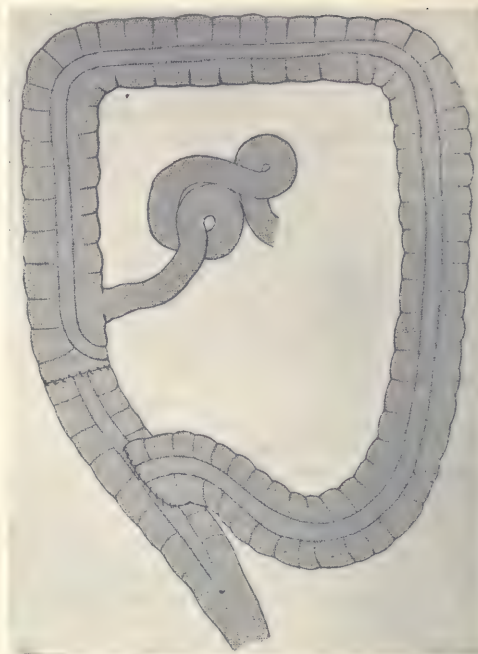


Fig. 3. Showing the correct result. Approximating suture below the sigmo-sigmoid implantation to fix the angle of the Y.

4th Step. An intestinal clamp is placed above the bottom of the cæcum to mark the limit of the cæcum which is to be resected.

5th Step. After milking away the contents, two intestinal clamps are placed on the sigmoid. It should be cut high enough toward the colon to make the right cæco-sigmoid branch a little longer than the left colon sigmoid branch in order to leave some distance between the two anastomoses. If the colon loop is too long, the Y will be inverted, which might lead to a vicious circle (Fig. 1). The two clamps should include most of the depth of the mesocolon and the extremities should be in apposition.

6th Step. The iliac sigmoid is now cut between the clamps, the cut surfaces being cauterized. The mesocolon is cut to the end of the long clamp and immediately sewed over to control hæmorrhage. The upper extremity of the cut colon is wrapped in saline gauze and laid aside.

7th Step. The inferior end of the sigmoid is placed in apposition to the cæcum and the posterior layer of serous sutures is passed. (Fig. 2.)

8th Step. The anastomosis between the cæcum and sigmoid is completed, both sigmoid and cæcum being cut across just proximal to the sealing clamps before the sutures are passed.

9th Step. The compresses are removed from the superior end of the cut sigmoid and, after choosing a point far enough from the cæcal anastomosis and at the same time high enough so that the work can

be done outside the abdomen, the sigmoid-sigmoidostomy is done in the usual manner. This presents no particular difficulty as patients for whom this operation is indicated usually have a long sigmoid.

roth Step. The suture as passed in step two is now tied just tight enough to close the opening in the mesentery and the operation is terminated by replacing the intestines and closing the abdomen. The result obtained is represented schematically by Fig. 3.

ELLIS FISCHEL.

Heile: The Origin of Inflammations in the Appendix on the Basis of Bacteriological and Experimental Evidence (Über die Entstehung der Entzündungen am Blinddarmanhang auf bakteriologischer und experimenteller Grundlage). *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 345.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the course of inflammations of the appendix variable processes, bacterial and mechanical, are usually present. The important question as to which process induced the inflammation remains unsolved. The presence of bacteria even in the earliest stages does not clear up the etiology any further. Even though the bacteria must be considered as the causal factors of the later inflammation, mechanical factors are nevertheless contributory.

From animal experimentation the author concludes that the advancing destructive inflammation of the appendix with secondary peritonitis is caused by the action of toxic substances formed by the retention of the contents of the appendix. The toxins arise on the one hand from a variety of bacteria which in themselves are not pathogenic, and on the other hand by changing the media in which they grow. The destructive inflammation of the appendix therefore is not an infectious disease. This is further proven by the fact that bacteria are never found in the circulating blood and secondary metastatic abscesses are never developed. All prophylactic measures must be based on the fact that the inflammation is due to an intoxication. It is of importance not only to prevent the retention of substances but also to influence that which has been retained. Incompletely split up albumen is very dangerous as it may enter the appendix in the change from a diarrhoea to constipation.

ZUR VERTH.

Rjesanoff: Anatomical Consideration of Ligamentous Formations About the Proximal End of the Large Intestine; Ligamentum Variforme (Schwartige Ablagerungen in der Gegend des proximalen Abschnittes des Dickdarms als anatomisches Gebilde; Ligamentum varioforme). *Chirurgia*, 1913, xxxiii, 126.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This article represents an extensive anatomical study — an original investigation on many cadavers. It was the author's purpose to study the normal conditions of these membranous formations, and therefore only those cadavers were selected which presented absolutely normal abdominal findings. Ninety-three bodies were studied. Five distinct

types are described according to the manner in which the peritoneal membranes are disposed. 1. When they are extensive, they envelop the gall-bladder and cover the ascending colon as far as the cæcum. In these cases the membrane appears much like a continuation of the small omentum. 2. The ligaments cover the ascending colon, the cæcum and possibly the appendix. 3. These are cases in which the peritoneal folds affect only the cæcal region, the appendix being frequently attached to the cæcal wall. 4. Rare instances in which the ligamentous folds begin in the right abdominal wall, extend across the cæcum and ascending colon and blend with the great omentum. These formations are described also as ligamenta cæco-parietale and ligamenta mesenteric-parietale. 5. To the last group belong those cases in which the floor of the cæcum is fixed in an unusual position. Many of the above classified peritoneal folds have been previously described under various names, for example, ligamentum felleocysticum-pylorocolicum (Huschke and Luschka) more recently by Jonnescu in 32 per cent, Ancel and Sencert in 58.7 per cent.

In all individuals presenting any of these conditions, certain other peculiarities can be detected in the abdomen. The description of these constitutes another chapter of the article. The great omentum shows an abnormally large development. The descending colon is often under-developed. The sigmoid is usually fixed in the left iliac fossa. The mesentery of the small intestine is unusually wide at its attachment. The course of the mesenteric vessels also is peculiar. The results of these investigations are tabulated and well illustrated by thirty-five drawings. The peculiarities in the development of the bowel are also discussed.

After quoting the literature extensively and going into the subject in detail, the author concludes that there is a close connection between the embryonic development of the gut and the later development of the peritoneal folds or membranes. His opinion is supported by personal observations on fourteen embryos between the ages of one and five months. The single cases of varying peritoneal folds are discussed in detail and well illustrated. In conclusion the author again points out that membranous developments about the proximal end of the large gut are not looked upon as the result of inflammatory processes, as surgeons frequently assert, but that we have here to deal with anatomical structures which have a developmental history of their own. Since these structures possess an embryological development of their own and can therefore vary widely, the author has proposed the name "ligamentum varioforme."

SCHAAACK.

Goldthwait: Orthopedic Principles in the Treatment of Abdominal Visceroptosis and Chronic Intestinal Stasis. *Surg., Gynec. & Obst.*, 1913, xvi, 587.

By Surg., Gynec. & Obst.

The work of the orthopedist in these cases consists in the modeling of the body so that the common

deformities of flat chest and the narrowed upper abdomen, with the acute angle at the costal border, with the hyperextension of the lower spine, the forward protrusion of the head, the marked relaxation of the abdominal wall, etc., can be overcome.

It is impossible for the viscera to work correctly unless they can be put in their normal position and in the extreme type of congenital visceroptosis the space in the upper abdomen does not exist if the patient has reached the age of maturity. It is essential in these cases to remodel the body so that the ribs are flared and the space in the upper abdomen restored to its normal shape and size. In this way the abdominal wall will be tightened and the strain upon the muscles will be lessened and their tone restored. In the mere remodeling of the body the organs naturally sag back more nearly into their normal positions, even without any artificial support. Artificial support is, of course, needed in the extreme cases to maintain the poise until the muscles and ligaments can have gained their proper tone.

The aim which the orthopedic surgeon has in mind is to make the poorly nourished, badly poised, inefficient, visceroptotic type of individual, strong well poised and vigorous. Postures, both when standing and lying down, braces, exercises, stimulating bathing, massage,—all have their place in bringing about this remodeling. In such position or with such postures and as a result of the natural improvement with the viscera, frequently the intestinal stasis or difficulty in the evacuation of the bowel is very much lessened, if not wholly controlled.

Such a restoration of the poise and proper contour of the body produces free circulation in the spinal cord and the natural improvement in the nervous and mental vigor of the individual. With such an understanding of the problem the author feels that the prognosis in most of these cases is good, even though the degree of visceroptosis is extreme.

Maylard: Abdominal Incisions and Intestinal Anastomosis in the Treatment of Carcinoma of the Colon. *Glasgow M. J.*, 1913, lxxix, 401.

By Surg., Gynec. & Obst.

Maylard emphasized the advisability of certain incisions and methods of intestinal anastomosis for carcinoma of the colon. He advocates either transverse or oblique incisions; that is to say, incisions are transverse in the mid and upper abdomen, oblique in the lower. Vertical incisions he uses only for diagnostic purposes. He prefers the transverse and oblique incisions first, because they effect the freest possible exposure, and therefore admit of free removal of diseased bowel, and second, because they result in cicatrices that are least likely to weaken and cause herniæ. In the case of tumor or stricture of transverse colon, the incision is carried across the abdomen from one to two inches above the umbilicus. The recti muscles are divided if necessary and no untoward effects accrue if the rectus sheath is secured in front and behind the muscles; a secure and non-giving cicatrix results.

In case the hepatic or splenic flexures are involved, or the ascending or descending colon, transverse incisions are carried outward from points situated respectively above and to the right or left of the umbilicus. The great advantage of these incisions lies in the anatomical fact that there is no cross division of the muscle or aponeurotic fibers. In case of involvement of cæcum, lower part of ascending colon, lower descending colon, the iliac colon, or the pelvic colon, an oblique iliac incision is best.

The success in intestinal anastomosis depends upon two essential conditions. First, the healthier the bowel edges along the line of union the more rapid and secure the healing. It is largely because of the unhealthy condition of the bowel edges that failure so commonly occurs when anastomosis is attempted under conditions of acute obstruction. The second consideration is the perfect coaptation of uninterrupted serous surfaces. The author prefers "end to side" anastomosis, with invagination of proximal segment, where excision does not interfere. As the great danger in colon anastomosis lies in the divided meso-colon, with its lacteals and lymphatics serving as an atrium of infection, it was the author's aim to obviate this condition by his invagination anastomosis. Maylard further recommends forcible dilatation of the anus to allow expulsion of gas and thereby prevent strain on suture line of anastomosis.

R. W. McNEALY.

Turnure: Gas Cysts of the Intestine. *Ann. Surg.*, Phila., 1913, lvii, 811. By Surg., Gynec. & Obst.

Turnure gives a synopsis of the forty-nine reported cases with a report of his own case. He states that intestinal pneumatosis is a chronic, probably self-limited process, consisting of the formation of gas cysts, which may occupy any layer of the intestinal wall. The gas acting as a foreign body gives rise to inflammatory changes and leads to the formation of giant cells. Furthermore that thirty-five out of the forty-four cases show the presence of gastric or duodenal ulcers or at least symptoms pointing to some chronic disease of the intestinal tract of years' standing.

The views of the origin of intestinal pneumatosis vary widely, but may be grouped as follows:

1. The gas-forming bacterial theory which is endorsed by the majority of observers.
2. The mechanical theory, in which the process is entirely analogous to that of traumatic emphysema; viz., that the intestinal gas escapes from minute ruptures in the bowel wall.
3. The neoplastic theory in which the gas cysts are considered as new growths, the center of which have undergone degeneration, followed by liquefaction and the formation of gas.
4. The chemical theory in which the coli ærogenes group of bacteria is thought to form the cysts.

A summary of the chief characteristics of the lesions found by Turnure is as follows:

1. Extensive gas cyst formation, situated for the most part outside the longitudinal muscular coat.

2. Characteristic appearances of the gas cysts and cyst walls, in which an endothelial lining and giant cells are a feature.

3. Occurrence of spaces or channels, some of which may be lymphatics partly lined by endothelium and partly filled with giant cells, endothelioid cells and leucocytes.

4. Evidences of dilatation of lymphatics and of the inter-communication of large lymphatic spaces, possibly cyst spaces, with undoubted lymph channels.

5. Absence of communication between cysts.

6. Inflammatory and productive processes between the cysts and under the peritoneum, resulting in the formation of connective tissue and fibromatous masses, leading to the obliteration of certain cysts and therefore to a kind of healing process.

7. Absence of bacteria in most of the cysts.

8. The deposition of highly refractive needles in the interior of many cysts, causing a peculiar flattening of the cells of the lining membrane, and the possible rôle of such crystalline matter in the production of some of the giant cells.

Thus Turnure concludes from the reported cases and from a study of his own that the condition is self-limited with a tendency to spontaneous cure.

HARVEY B. MATTHEWS.

Brown: The Value of Complete Physiological Rest of the Large Bowel in the Treatment of Certain Ulcerative and Obstructive Lesions of This Organ, with Description of Operative Technique and Report of Cases. *Surg., Gynec. & Obst.*, 1913, xvi, 610. By Surg., Gynec. & Obst.

Brown points out in his paper the advantages of complete physiological rest of the entire large bowel in the treatment of certain diseases of this organ which have heretofore been treated by various surgical methods. He describes a technique by which this rest can be accomplished, and how, when its purpose is fulfilled, the bowel can be put back into commission in a manner both safe and satisfactory. The type of cases in which the author has found this surgical rest treatment of value are enumerated as follow: (1) Mucous colitis associated with obstructive lesions; (2) ulcerative colitis (amœbic, bacillary, tuberculous, etc.); and (3) obstructions to the colon, acute and chronic, due to neoplasms.

In mucous colitis Brown's technique seems better to meet the indications than Lane's operation, or the Weir-Mitchell treatment, etc. By it all pericolic bands and adhesions can be severed, the cæcum elevated from the pelvis and the intestinal stasis immediately relieved. The entire colon can be put at rest and during this process of complete physiological quiet, the patient can be given the benefits which follow dietetic, hygienic and orthopedic treatment. In this way the bowel can be given a chance to regain its normal tone.

Technique: Through a right rectus incision sufficiently long for general exploratory purposes, the abdomen is opened. The cæcum is at once

sought and the entire large bowel is carefully examined. All pericolic adhesions are severed, the appendix removed and the stump buried. The ileum is next severed between two clamps, close to the ileocæcal valve. The distal ileum is tied off and buried as was the appendix. At a suitable part of the cæcum, a purse-string suture of linen is placed and the cæcum is next incised. Through this incision, a large catheter is inserted after which the purse-string is tightly tied. A second purse-string of No. 1 chromic catgut is next placed. Under the loops of this purse-string, three long catgut fixation sutures are placed. A stab-wound is next made at McBurney's point and the catheter and fixation sutures are pulled through. The peritoneal surfaces of the cæcum surrounding the catheter are next scarified. The catheter is now slipped through the button and the fixation sutures threaded through the eyes and tightly tied, thus closely approximating the serous surfaces of the cæcum to the parietal peritoneum. A stiff rubber drainage tube is next inserted into the proximal ileum, fixed with a double purse-string suture and brought out of the lower angle of the rectus incision. The parietal peritoneum is made to hug it snugly by a few catgut sutures and the abdominal wound is closed in the usual way.

The indications for restoring the continuity of the large bowel are (1) improvement of the patient's general condition and the return to normal, as shown after repeated chemical, microscopical, and culture growth examination of irrigation fluids passed. This restoration should not be made too early, particularly in the ulcerative lesions of the colon. To put the organ back into commission, restoration is readily accomplished by simply cutting out the anus and closing the distal ileum with a purse-string suture. A lateral anastomosis of the ileum to the ascending colon may be preformed or the ileum switched into the sigmoid (Lane). The author has never found any difficulty in restoring the continuity of the intestine.

The author bases his paper upon ten cases so operated. Two were cases of chronic intestinal stasis, with obstructions due to pericolic bands and flexures; both are greatly improved and now comparatively well. Three were operations for amœbic dysentery; all cases were cured. One ulcerative colitis with extensive involvement of the sigmoid and rectum; patient now in good health. One case of extensive obstructive tuberculous colitis; patient received great relief and lived in comfort for two months. Three were late and inoperable malignancies; one lived six months, one five months. The third is still living, nine months after operation and is comfortable and in reasonably good health.

Rosenheim: Colitis Chronica Gravis (Über Colitis chronica gravis). *Deutsche med. Wchnschr.*, 1913, xxxix, 989.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The difference between colitis gravis and simplex is only one of degree. In all cases a definite inflam-

matory condition of the mucous membrane exists, followed usually by erosions and tumor-like formation. Fistulae and abscesses may develop as secondary complications. Somnolence, colics, endocarditis, multiple neuritis, etc., are due to a general intoxication. A specific symptom complex does not exist. The prognosis is always doubtful. Rosenheim observed three deaths (peritonitis, sepsis and general cachexia) in his series of fifteen cases.

Rest in bed, bland diet, opium, tannin, bolus alba, bismuth, etc., frequently accomplish much therapeutically. A local treatment of the colon is impossible in many cases on account of the sensitiveness. The insufflation treatment is of no value. Irrigations with boric acid and tannic acid are of value in mild cases only. Enemata of starch, gelatine and gum arabic appear to be of more value. Surgical treatment should then be considered only when internal therapy has proved futile, but under certain conditions it may be a life-saving procedure. Special indications for surgical intervention are prolonged fever, progressive emaciation, marked discharge of pus in the faeces and local or general complications.

WOLFSOHN.

Graham: Report of a Case of Faecal Tumor Associated with Hirschsprung's Disease. *Tr. Am. Proctol. Soc.*, 1913, June.

By Surg., Gynec. & Obst.

Graham reports a case of faecal tumor with Hirschsprung's disease, which was that of a young French woman, aged twenty-seven, who had undergone three abdominal operations. Present illness dates from birth. Not unusual to go a week or ten days without a stool, and then evacuation was produced only by means of enemata.

At the age of 19, she was operated upon and a large faecal tumor was removed from the sigmoid. At the age of 25, she suffered another attack of complete intestinal obstruction. She was operated upon again, and this time a large faecal tumor was removed.

In August, 1912, for the third time, she presented symptoms of complete intestinal obstruction for seven days. Abdomen enlarged and general tympanitis except in the lower right quadrant, where there was a dull area corresponding to a large tumor, which could be readily palpated. The tumor, a faecal mass, was exceedingly hard and did not pit on pressure. It could be easily moved in every direction throughout the abdomen. Attacks of violent, colicky pains were frequent. Vomiting was persistent, pulse 120, temperature 101° F. She requested that the faecal tumor be removed, but refused to give her consent to any short-circuiting or resection of the bowel.

At operation the tumor was found in sigmoid. Its greatest circumference was 19¾ inches; its weight was 64 ounces. The dilatation which was confined to the sigmoid was very marked, the greatest circumference being 20 inches. Patient made an uneventful recovery, and was discharged from the

hospital on the tenth day. She gained in weight, and appeared to be in the best of health. She experienced no difficulty in procuring daily evacuations with the aid of small doses of cascara. On December 15, 1912, she was doing nicely. Information was received later that she was operated upon April 19, 1913, and died three days after.

Von Beck: Late Conditions after Exclusion of the Colon by Means of Ileosigmoidostomy (Spätzustände nach Dickdarmausschaltung durch Enteranastomos zwischen Ileum und Flexura sigmoidea Ileosigmoidostomie). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 338. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Von Beck reports his results in fifty-two cases of colon exclusion by means of ileosigmoidostomy performed for chronic ulcerous colitis (26), chronic pericolicitis and displacement (6), extensive tuberculous of the bowel (10), and for inoperable colon carcinoma (10). Three cases died during the first four weeks after the operation (peritonitis, pneumonia, thrombosis); in the remaining forty-nine cases a good functional anastomosis resulted, no bad effects following the short circuiting. The length of life of the carcinomatous patients after operation was four to twelve months. Excellent end results were obtained in the tuberculous cases, even in extensive involvement of the lower ileum, caecum and colon.

These cases were operated in two stages; in the first, the diseased area was extirpated, the ascending colon tied off and the ileum was anchored anteriorly to the abdominal wall; after four to six weeks the ileum was sutured to the sigmoid and the tuberculous ascending and transverse colon were then excluded. Results: One death, three years after operation, from tuberculous infection of the bowel, the colon, however, being normal; two deaths, six and eight years, respectively, after operation of pulmonary phthisis, colon entirely normal. Of the remaining seven cases, six are well and able to perform their daily duties (four to ten years after operation). Of the thirty-two cases operated for colitis, pericolicitis and displacement, six cases returned in from one to five years complaining of gradually increasing obstipation, relative obstruction or retrograde peristalsis. All were women. In three of the cases an appendicostomy had been performed and irrigation treatment employed ineffectively. In three cases a secondary operation was necessary on account of retrograde peristalsis, saccular dilatation of the rectum, faecal accumulation to the middle of the transverse colon and spasms in the ileum and jejunum. In these cases the author recommends the exclusion of the colon by means of ileosigmoidostomy with invagination of the distal end of the ileum into the caecum. In cases of spasm and retrograde peristalsis—peculiar to the female sex—he advises making an end to end anastomosis between the ileum and sigmoid and anchoring the upper end of the sigmoid outside as a mucous fistula or extirpating the colon at a later date.

BLEZINGER

Libensky: The Initial Stages of Atypical Neoflexure in the Rectum and the Sigmoid Flexure (Die ersten Anfänge der atypischen Neubildung im Rectum und im S. romanum). *Ztschr. f. klin. Med.*, 1913, lxxvii, 355.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has observed two cases of recurrent adenoma of the sigmoid flexure and their metaphysis into atypical new growths. He reports a number of similar cases from literature and emphasizes the importance of rectoscopy on account of the uncertainty of the symptoms. Eight autopsies are reported from the author's own observations and he points out that the condition of the pedicle of the adenomatous polyps is of special prognostic importance. Only polyps with thin pedicles may be considered benign. Broad pedunculated polyps necessitate the extirpation of the entire base of insertion to prevent recurrence.

HELLER.

Baermann and Heinemann: Treatment of Amoebic Dysentery with Emetin (Die Behandlung der Amöbendysenterie mit Emetin). *München. med. Wchnschr.*, 1913, lx, 1132.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors experimenting with emetin from different manufacturers furnishing samples of varying strength found that the drug was very toxic for amoebæ. When injected subcutaneously, or better still, intravenously, most of the organisms—and in especially favorable cases, all of them—in the intestinal wall and in the ulcerated areas were killed. After 10–70 days a few organisms may again be found. There are, however, strains of amoebæ which evidently withstand the effects of emetin. Cysts do not seem to be directly affected by it though its early use will possibly intercept their formation. With the use of emetin even in the severest cases prompt healing takes place in the ulcerated areas of the bowel.

The maximum intravenous dose is 250 mg. per 60 kg. body weight. The best results were obtained by the following method: 1–2 intravenous injections with 100 ccm. physiological NaCl solution, or the subcutaneous injection of 150–200 mg. followed after 8–10 days and at intervals of 2–3 days, according to the condition of the stools, by 4–5 subcutaneous injections of 100–120 mg. Where necessary a similar course of treatment may be repeatedly given at intervals of 3–4 weeks.

VERTH.

Proust: Rectal Prolapse Treated by Colopexy and Peri-anal Wiring; on the Coexistence of Rectal and Genital Prolapse; on Hystero-colopexy (Prolapsus du rectum traité par la colopexie et le cerclage de l'an; de l'association des prolapsus rectaux et génitaux; de l'hystéro-colopexie). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 657.

By Journal de Chirurgie.

Proust's patient, a woman 48 years old, whose prolapse dated back 8 years, had previously had a supravaginal hysterectomy. Laparotomy showed a very deep Douglas pouch which was obliterated. The

sigmoid loop was anchored, above the uterine stump, to the remnants of the round ligaments and to the peritoneal covering of the bladder. Two months later, a peri-anal wiring was made to correct a tendency to eversion of the anal mucosa. A year after the operation, there is a slight abdominal eventration; the prolapse remains cured; the silver wire is still unbroken.

QUÉNU, commenting on this report, points out the influence hysterectomy may have on the development of rectal prolapse. The uterus and rectum have common means of suspension; therefore, any cause bringing about the fall of one endangers the fixity of the other. Hysterectomy deprives the rectum of the anterior support afforded it normally by the uterus. The weakening of the pelvic floor favors the prolapse of both organs. Hence the not infrequent association of rectal and genital prolapse and the wisdom of anchoring both the rectum and uterus when colopexy is resorted to. In a case of large prolapse, Quénu first sutured the vaginal vault to the rectum; next he stitched the upper edges of the broad ligaments to the posterior peritoneum on each side of the gut; and finally laid the sigmoid loop crosswise and anchored up to the left iliac fossa, where a small slit was made in the posterior peritoneum. The tendon of the lesser psoas muscle was bared and the bowel stitched to it. The uterus, from the cervix to the fundus, was also sutured to the anterior abdominal wall. In younger women this total hysteropexy would be replaced by a shortening of the round ligaments.

LENORMANT states that the association of rectal and genital prolapse, though not uncommon, is far from constant. To the giving way of the pelvic floor, which undoubtedly is a potent predisposing cause, must, however, be added an abnormal length and mobility of the pelvic colon. This explains why, while genital prolapse is so common in women, rectal prolapse is almost as rare in females as in males, and also why, in large rectal prolapse, colopexy is a necessary adjunct to perineorrhaphy.

Lenormant always uses the Quénu-Duval technique for colopexy, oftentimes supplementing it with a Thiersch peri-anal wiring. The latter operation alone is an excellent palliative procedure in cases in which a major operation is contra-indicated; it is sometimes sufficient in children. Lenormant has performed colopexy 9 times for large prolapses. Out of 5 cases that could be followed, 2 had rapid recurrences, 3 are cured after 4½, 7 and 8 years.

MAUCLAIRE has performed three colopexies after hysteropexy or colpoperineorrhaphy. He had one operative death; one case could not be followed; the third is perfectly well 18 months after the operation.

J. DUMONT.

MacLaren: Rectal Section for Pelvic Abscess in Men. *J.-Lancet*, 1913, xxxiii, 254.

By Surg., Gynec. & Obst.

The author opens the paper with a report of a case. A boy, 12 years old, was brought to the

hospital three days after the onset of appendicitis. The appendix had ruptured. He was immediately operated and much pus was found in the abdomen. Two drains were inserted, one to the bottom of the pelvis and the other to the base of the appendix. He did not improve very much following the operation. On the tenth day following the abdominal section he was very sick, having a pinched, drawn face and a rigid, much distended abdomen. His operative wound was discharging considerable pus. He complained of a great deal of pain. His anus was widely open, the anterior wall bulging, and the peritoneal cul-de-sac was distended to its utmost by a collection of pus which filled the pelvis. The sac was opened with a sharp pointed scissors, using them as a dilator. At least a quart of serous pus came away first, followed by thick, foul, colon pus. A winged rubber tube was inserted. His improvement was very rapid.

In the hands of the author, rectal section for the drainage of pus in the pelvis has proven a life-saving measure. The results are immediate and brilliant. As the operation is so simple it is hard to understand why there is so much prejudice by so many surgeons against doing it. A second abdominal operation in these cases is so frequently followed by death that the author now hesitates to perform it and does a rectal section instead. Since the institution of the method his mortality rate has been considerably reduced. This method of treatment is especially adaptable to those cases of appendicitis with abscess formation which occur in young children. It may be used as preliminary operation in those cases which reach the surgeon exhausted and very septic and with large abscesses in the pelvis. If after opening the rectum the patient does not immediately improve, the abdomen should be opened.

EDWARD L. CORNELL.

Deloire: Autoplasty with Flaps of Fat in Anal Fistula (De l'autoplastie graisseuse dans la fistule anale). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, xxi, 889. By *Journal de Chirurgie*.

In extra-sphincteric anal fistula, non-tuberculous, incision or even extirpation of the fistula is insufficient, because the perirectal fat has disappeared and the cavity does not fill up. On the other hand, any method dividing the sphincter would result almost with certainty in faecal incontinence.

In such a case, the writer dissected and extirpated the fistulous tract. The bottom of the wound was bounded by the left side of the rectum. Six months later, the cavity was still $1\frac{1}{4}$ to $1\frac{1}{2}$ inches deep and wide enough to admit a pencil. Then a cutaneous flap was cut from the left thigh, the subcutaneous fat being carefully preserved; the pedicle was rotated so as to bring the flap in the wound created by the freshened edges of the cavity. The skin was sutured to the skin, while the fat went to fill the perirectal gap. The result was all that could be desired.

J. DUMONT.

Barnes: A Method of Operating on Fistula without Cutting Muscular Tissue. *Tr. Am. Proctol. Soc.*, 1913, June. By Surg., Gynec. & Obst.

This method is used in those cases of fistulae which involve the sphincter muscles. An incision is made external to the sphincter, similar to that made when incising an ischio-rectal abscess. Through this opening the scar tissue is dissected out up to the internal opening. An incision is then made at the skin margin, so that the middle of this incision passes through an imaginary longitudinal line drawn from the internal opening. A submucous dissection is then channeled out up to the internal opening. Gauze drainage is kept in this until the external wound is healed sufficiently. Then the submucous tract, which remains, is incised under local anaesthesia. No muscular tissue having been cut, the function of the sphincters is preserved intact.

Zobel: A Further Consideration of Sir Charles Ball's Operation for Intestinal Hæmorrhoids. *Tr. Am. Proctol. Soc.*, 1913, June.

By Surg., Gynec. & Obst.

In every instance in which the essentials of Ball's technique have been followed out carefully, the author's results have been exceedingly satisfactory.

After a trial of this operation, the author sums up his conclusions as to its value as follows: That, as a modification of the old ligature operation, it is better than the latter, and at the same time is far superior to the clamp and cautery operation, in that it takes care of and avoids the recurrence of that revolut anal skin ring which generally becomes markedly oedematous immediately after these operations, leaving behind skin tags after the swelling subsides.

Murray: Further Observations on Pruritis Ani; Its Probable Etiologic Factor; Results of Treatment. *Tr. Am. Proctol. Soc.*, 1913, June.

By Surg., Gynec. & Obst.

Murray finds no reason for materially modifying his former reports, but has gathered data which has helped to prove the correctness of his previous work. He found streptococcic infection in three cases of pruritis ani and vulvæ, and in four cases in which the anus and the scrotum were involved. These complicated cases, with the exception of two vulva cases, improved by the use of the vaccine treatment.

In the past year Murray has increased his former series of thirty-two cases, by twenty-five, in five of which streptococcic infection was not found. These cases showed other infections, which still further proves the coccigenous nature of pruritus ani, and demonstrates also that other bacteria than streptococci may bear a causal relationship, as was hinted in the author's first paper on this subject. His cases, so far as he has been able to determine, have not been affected by diet. Since he discovered the infection in pruritus ani he has never changed the diet of any patient; neither has he restricted them in the smoking or drinking habits. The improvement

under the vaccine treatment, without regard to eating, drinking, or smoking, gives him additional proof for the bacterial theory.

During the past year Murray has carefully investigated the itching to discover whether it extends into the anal canal beyond Hilton's white line. He found that only in one instance did it extend beyond that point, and then only for a short distance. His investigations have given him additional proof that pruritus ani is not caused by any local lesion within the anal canal, and that when such lesions exist with pruritus ani they are coincidental. In the cases operated for local lesions, the pruritus ani has not been permanently improved as a result of the operative procedure.

Murray states that rectal and general surgeons have observed many cases of fistulæ with discharges upon the anal skin, not accompanied by pruritus ani. The same is true of hæmorrhoids, constipation, and other rectal lesions, pruritus ani occurring in only a small proportion of such cases. Murray, therefore, still holds that when pruritus ani exists in connection with other lesions it is a coincidence. In his 1912 report he gave a summary of nine hundred consecutive rectal cases wherein this fact was established fairly well.

The author refers to the opsonic index, or, more properly, the coefficient of extinction of opsonins, and claims that much valuable information is to be gained by this test. His work shows that if a complicating infection exists and other bacteria than streptococci are found to be the sole invading organisms, we must use the corresponding autogenous vaccine. The opsonic index, following a bacterial diagnosis, is the proper method for determining this.

The results of treatment and the history of patients prove to him that if pruritus ani exists with local lesions which demand operation, the prognosis depends upon whether a skin infection is present or not. If the skin infection is present the local lesions may be cured by the operation, but the patient should not be led to believe that the pruritus ani also will be cured by it. Per contra, if a skin infection does not exist with a local lesion and itching, the prognosis may be that it is very probable that the itching will cease with the cure of the local lesion.

After personal investigation in treating; watching results; noting how cause, effect, and results dovetail together; comparing these investigations with statements and theories made in textbooks, and in articles appearing from time to time in medical journals, containing no definite pathology or scientific reasons for cause and effect, Murray cannot understand how the profession will uphold such theories in preference to the bacterial theory which has been so well proven in his own cases and confirmed by other observers.

The uniformity of the bacteriological findings is a strong support for the bacterial theory of the etiology of pruritus ani. The chronicity of all the cases; the uniformity of symptoms; the similarity of

the conditions of the skin; the locality; the regularity as to the time of attacks; the uniformity of itching outside of Hilton's white line; the uniformity of the blood findings as to the coefficient of extinction of opsonins, and the fact that all local applications which have given beneficial results in the past have contained a strong germicide,—all point directly to a common cause. Further confirmation is found in the uniformly good results of treatment with autogenous vaccine of the variety of bacteria against which the patient has a low phagocytic power, and in the lack of good results by the various haphazard methods of treatment in general vogue.

Endo's medium is used to plate the cultures. The vaccine employed is of the strength of one billion to the cc., beginning with two minims, or one hundred and thirty millions.

Murray's references to fissures in previous papers having been misunderstood by some, he desires to state that he had referred only to fissure-like cracks of the skin and not to anal fissures or ulcers.

LIVER, PANCREAS, AND SPLEEN

Opokin and Schlamoff: Hemostatic Effect of Muscle Tissue in Injuries of the Liver (Zur Frage der blutstillenden Wirkung der Muskeln bei Leberverletzungen). *Arb. a. d. chir. Klin. d. Prof. S. Fedoroff a. d. milit. med. Akad., St. Petersburg, 1913, vii, 91.* By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the past few years the efforts at hæmostasis in injuries of the liver have tended toward a new direction. An attempt is being made to stop the hæmorrhage by covering the surface of the liver with living tissue by plastic operation. To this class of work belong the unsuccessful experiments and clinical observations on transplantations of the omentum (Loewy, Boljarski, Hesse), the more recent attempts at fascia transplantation (Kirschner, David), and, lastly, the efforts of Læwen to cover the bleeding surface with muscle tissue. These experiments were performed only on rabbits, and give rise to the following queries: 1. Has the muscle tissue hæmostatic properties, or does it simply act as a mechanical tampon? 2. To what extent can plastic work with muscles be employed in hæmorrhages from parenchymatous organs? 3. How is the hæmostatic influence of muscle tissue to be explained?

To answer these questions the authors performed experiments on dogs. The muscles used were the rectus, or preferably the gluteus maximus. The muscle tissue was divided into thin slices, and preserved in warm salt solution while the wound in the liver was produced. It was made as large as possible without removing much liver tissue. The areas varied in size with that of the dogs, from 2 x 4.5 to 3.5 x 12 cm. Bleeding was profuse, but was rapidly checked by the implantation of the muscular flap, and finally stopped entirely. The fixation sutures had little to do with checking the hæmorrhage, but the muscular flap does act to some extent as a tampon. Twelve dogs were used for the

tests. Four died of peritonitis in from two to five days, two of pneumonia after one and three weeks. The rest were killed at varying intervals, three months being the longest period of observation. Microscopic examination in the early cases showed round cell infiltration in the transplanted muscle and in the later ones connective tissue change. In three cases the flap became necrotic and sloughed out. Secondary hæmorrhage did not occur.

The best part of the paper is devoted to a discussion of the thrombokinetic action of muscles. According to Loeb (1904) muscle extract possesses exceptionally strong blood-clotting qualities. To satisfy themselves on this point the authors experimented with extracts of the muscle, lung and liver of five rabbits, testing the thrombokinetic action in vitro. The technique followed was that of Prof. Slowzoff. The results showed that lung extract possessed the strongest blood-clotting properties, and that of muscle alone, the second. Liver extract possesses but slight clotting power.

After further theoretical discussion the authors conclude that the transplantation of muscle tissue into wounds of the liver for hæmostatic purposes deserves increased attention, especially from a biological standpoint.

SCHAAK.

Norris: Solitary Cysts of the Liver. *Ann. Surg., Phila.*, 1913, lvii, 805. By Surg., Gynec. & Obst.

Norris states that true solitary cysts of the liver of non-parasitic origin are rare lesions as compared with other conditions found in and about that organ. Many reported as such have been congenitally dilated gall-bladders or ducts, cystadenomata, or true cystic livers and not true single cysts. These cysts may be intra- or extra-hepatic and of any size up to several liters content, and they occur more frequently on the under surface of the right lobe of the liver. They are more common in the female and late middle life. The causation of these cysts may be summed up as follows:

1. Confluence from cystic degeneration or occlusion of aberrant bile-ducts.
2. Degenerative changes in nævi; these are usually small.
3. Cystic changes in an adenoma of the bile-ducts, usually large.
4. In the case Norris reports, infarct, a possible cause.

Moschcowitz, in 1906, said that these cysts were associated with congenital anomalies in other parts of the body, especially cysts of the kidney. That this is not necessarily so has been proven by the fact that they have been found unassociated with other anomalies.

Certain definite changes take place in the cysts of long standing, such as calcareous infiltration, numerous blood vessels; and they are usually surrounded by a firm fibrous capsule, the inner surface is smooth, often ridged and of an opaque white color. In places the wall may be so thinned as not to show this characteristic appearance. The con-

tents vary. Usually colorless fluid fills the cavity, although there may be bile or blood-tinged fluid. Albumin is present; in some cases bile pigment, blood, hæmatoidin, cholesterin and tyrosin have been found. Microscopically the capsule is composed of laminated fibrous tissue which may contain bile-ducts sometimes dilated. Occasionally blood pigment is found between the bundles of fibrous tissue. The fibrous tissue invades the liver tissue for a short distance and is lined internally with a layer of epithelial cells, which may be columnar or polyhedral in the small cysts.

As these cysts do not give symptoms until they are of sufficient size to cause pressure they are usually diagnosed post-mortem. They may be mistaken for a distended gall-bladder, cystic liver, echinococcic cyst, gumma, or cyst of some neighboring organ.

The operative results have been satisfactory and the procedure should be as radical as is consistently safe. If enucleation can be done without severe hæmorrhage, this is the best method. If there are very firm attachments and other contra-indications to enucleation, it is best to suture the cyst wall to the parietal peritoneum and drain. Simple puncture is to be condemned. In the case reported, Norris evacuated a cyst the size of an orange, containing 200 cc. of clear fluid, sutured the cyst wall to the parietal peritoneum, drained the cavity and closed the abdomen in the usual way. Convalescence was normal and the drainage tract closed in four weeks.

HARVEY B. MATTHEWS.

Khautz: Cholelithiasis and Cholecystitis During Childhood and Its Treatment (Cholelithiasis und Cholecystitis im Kindesalter und ihre Behandlung). *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, 545.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The occurrence of gall-stones during childhood is extremely rare. The author was able to collect only fifteen cases. Five of these are autopsy findings and only one clinical observation in the new-born and nurslings. There were 5 cases between 5 and 10 years and 4 between 13 and 17 years old. The stones are described as polyhedral or ovoid cholesterol masses. Those in infants weighed up to 2 g. Those in older children were the size of a pea and over.

It cannot be stated whether the female sex also is predisposed during childhood; sex is not mentioned in most cases. The four cases over 13 years were all girls. The clinical phenomena are practically the same as in the adult. The diagnosis in the absence of icterus and enlargement of the gall-bladder is difficult on account of the rarity of the disease. It is confirmed only by finding the stones in the fæces as was possible in several cases. The treatment is based on the same principles as in the adult. Pure cholecystitis without stone is still much rarer. Case reports and literature are appended.

UNTER ECKER.

Bachy: Cholecystectomy in Cholelithiasis; Indications and Results (De la cholécystectomie dans le lithiase vésiculaire; indications et résultats). *Thèse de doct., Par., 1913.* By Journal de Chirurgie.

The author, basing his conclusions on 80 cases of Lejars, Gosset and Desmarest, believes cholecystectomy the only sure cure for cholelithiasis. Medical treatment is unsatisfactory as it is apt to be followed by more severe attacks, occlusion of the bile passages, intestinal or pyloric obstruction, peritonitis, biliary cirrhosis or cancerous degeneration.

Removal of the gall-bladder is made justifiable in the first place by the conditions of the paravesicular organs; acute or subacute cholecystitis with pus abscess and chronic sclerosis hydrops of the gall-bladder are all indications. No functional disturbance follows its removal. After cholecystotomies recurrences are frequent and further operation is made difficult by the adhesions formed about the gall-bladder. In acute, acute suppurative and chronic cholecystitis and in hydrops of the bladder, simple cholecystectomy gives excellent results. When the gall-bladder trouble is complicated by adhesions to the intestinal tract or dilatation of the bladder giving symptoms of obstruction, it may be necessary to do a gastro-enterostomy as well as a cholecystectomy. When there is a chronic pancreatitis, which is very hard to differentiate from gall-bladder disease alone, drainage of the common duct may be necessary in addition to removal of the bladder, but four such cases have cleared up without drainage.

Bachy advises ether anæsthesia after injection of pantopon, Sprengel's incision, cholecystectomy according to the Gosset and Desmarest method and always drainage by gauze from the cut end of the cystic duct. One cholecystectomy was done for acute cholecystitis; 46 for chronic cholelithiasis; 7 for cholecystitis with pericholecystitis; one for recurrence after cholecystostomy; 4 for fistulæ; 8 combined with appendectomy or gastro-enterostomy for cholecystitis with digestive troubles; 6 for hydrops of the gall-bladder with stone in the cystic duct; and 4 for cholecysto-pancreatitis.

The mortality was 1.25 per cent. One patient died after seven months of generalized carcinoma, primarily in the gall-bladder; another died after two years of sarcoma of the liver. There were three passing recurrences. The four cases of pancreatitis were cured.

PIERRE MOCQUOT.

Jacob: Suprapubic Fistula after Post-Typhoid Suppurative Cholecystitis; Cholecystectomy; Recovery with Persistence of the Bacilli in the Stools (Fistule sus-pubienne consécutive à une cholécystite suppurée post-typhoïdique; cholécystectomie; guérison, avec persistance de bacilles paratyphoïdes dans les fèces). *Bull. et mem. Soc. de chir. de Par., 1913, xxxix, xx, 879.* By Journal de Chirurgie.

A soldier, 21 years old, six weeks after the onset of a mild typhoid fever, complained suddenly of pain in the right half of the abdomen and in the

right shoulder. A collection developed above the pubis without jaundice or high fever. On incision pus was evacuated; later gall-stones and bile came out. Finally a fistulous opening remained in the laparotomy incision, just midway between the symphysis and navel. Small calculi occasionally, and bile containing large numbers of paratyphoid bacilli continuously, escaped from it.

Cholecystectomy through a transverse incision proved very difficult owing to the exceedingly dense adhesions. The gall-bladder was found much thickened and stuffed with calculi; its ulcerated fundus communicated with the sinus by a long fistulous tract burrowed through masses of adhesions. The hepatic and common ducts were normal. Recovery was uneventful but the man remains a chronic bacillus carrier, as his fæces contain many paratyphoid bacilli.

J. DUMONT.

Stuckey: The Employment of the Omentum for Hæmostasis in Extirpation of the Gall-Bladder (Die freie Netztransplantation zur Blutstillung bei Gallenblasen-exstirpationen). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh., St. Petersburg, 1913, xxii, 43.* By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

During the extirpation of a gall-bladder severe hæmorrhage occurred from the liver which could not be controlled by tamponade nor by hemostats; the latter tore through the liver substance. The author decided to use omentum to cover the defect. After pressure for 1-2 minutes the transplanted piece of omentum remained adherent to the liver surface and the bleeding was controlled completely. Three days after operation death occurred from cardiac conditions.

Post-mortem examination showed that the omental covering had become adherent over the raw surface of the liver; where the serous covering of the liver was intact no adhesions took place. There was no blood in the peritoneal cavity. On cross section it was plainly seen that the omentum had become firmly adherent to the liver substance. This observation was confirmed by microscopical sections. Only here and there were small hæmorrhages found between the omentum and the liver substance. The adjoining liver substance was markedly hyperæmic. The omental capillaries were congested.

The author compares this method with that of Clairmont and Negri, who transplanted peritoneal flaps. He points out that omental transplantation has several advantages. There is always plenty of material. It can be obtained easily with slight traumatism. It forms adhesions more readily than other tissues. The hemostatic effect is more marked.

VON SCHILLING.

Jordan: Inhibitive Action of Bile on Bacillus Coli. *J. Infect. Dis., 1913, xii, No. 3.*

By Surg., Gynec. & Obst.

To ascertain the inhibitive action of bile upon *B. coli*, pure cultures were plated in parallel series

upon plain agar and bile agar. A colony count after 48 hours incubation showed marked inhibition by bile, both of strains of *B. coli* freshly isolated from human faeces and of those long cultivated on agar or kept for a year in water suspension. Several of the freshly isolated strains were inhibited to a somewhat greater degree than other strains kept in water suspension or cultivated on nutrient agar for many generations. These results do not support the assumption that the cells of *B. coli* inhibited by bile are those which have become "attenuated" by a long sojourn in water and are thus negligible in determining recent contamination. To investigate further this "attenuation" 100 colonies of *B. coli* fished from pure culture on plain agar plates and the same number from bile agar plates were tested for vigor in milk coagulation and maximum indol production. The cells of *B. coli* grown on bile agar showed no greater physiological activity than those grown on plain agar.

Samples of water and fresh sewage were tested with lactose broth and lactose bile in parallel series. In a water series of forty 5-cc. samples each, *B. coli* was isolated from 42 per cent of the lactose broth and from 30 per cent of the lactose bile tubes. In a second series of one hundred and fifty 1-cc. samples each, *B. coli* was isolated from 31 per cent of the lactose broth and from 22 per cent of the lactose bile tubes. In a sewage series of 70 samples each, properly diluted, *B. coli* was isolated from 50 per cent of the lactose broth and from 23 per cent of the lactose bile tubes. It thus appears that bile inhibits from one third to one half of the viable cells of *B. coli*.

Lange: A Case of Free Transplantation of the Omentum in a Stab Wound of the Spleen

(Ein Fall von freier Netztransplantation bei Stichverletzung der Milz). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh.*, St. Petersburg, 1913, xxii, 31. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The patient had a stab wound in the posterior axillary line at the level of the 9th rib. Severe anæmia and marked rigidity of the abdominal wall was present. A resection of the 9th and 10th ribs was performed. The wound in the diaphragm was enlarged. A wound of the spleen bleeding severely was found. The wound of the spleen was tamponed with a free end of the omentum; hæmorrhage ceased immediately. Isolation of the pleura according to Frey and tamponade completed the operation. Recovery resulted.

O. VON SCHILLING.

Michelson: Modern Surgery of the Spleen (Die Ergebnisse der modernen Milzchirurgie). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 480.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Michelson discusses the effect of splenectomy upon the organism. Numerous cases have proven that removal of the spleen does not result in any injury to the body. A hyperleucocytosis following splenectomy is specific and may last for years

under certain conditions. The biologic characteristics of the blood are changed temporarily; the antitryptic and bactericidal power of the serum is decreased at first, but soon returns to normal. Other phenomena following splenectomy are enlargement of the peripheral lymph glands, hyperplasia of the red bone marrow with pains in the long bones and an enlargement of the thyroid gland. These, however, are not constant. Several observations lead to the conclusion that under certain conditions small additional spleens may hypertrophy and take up the function of the removed organ. Injury of the spleen is a very frequent indication for surgical procedure. Diseased conditions of the spleen predispose to lacerations. During acute infectious diseases lesser traumas such as severe sneezing, coughing, and vomiting may cause fatal ruptures; the same is true of malaria. Of the subcutaneous injuries the following are differentiated: contusions of the spleen without laceration of the capsule. These demand intervention only in case the capsule ruptures secondarily or in case a hematoma suppurates or a blood cyst is formed. 2. The definite ruptures including capsule are usually transverse tears and multiple in 50 per cent of the cases. Laceration of the left kidney frequently accompanies the injury and may render the diagnosis extremely difficult. The clinical picture may be divided into three stages: (1) symptoms of shock; (2) stage of improvement (latency) usually of short duration but occasionally lasting for several days; (3) stage of terminal internal hæmorrhage. The cessation of the primary hæmorrhage occurs usually during the initial shock. In several cases the omentum entered the tear and aided. The diagnosis of the subcutaneous injury of the spleen can as a rule be made with a certain degree of probability. The operation of choice is splenectomy; only in markedly adherent large splenic tumors tamponade should suffice. Suture of the spleen is not advisable as several tears may be overlooked. Bullet wounds, stab wounds, and other open injuries of the spleen are usually accompanied by injury of other organs (lungs, pleura, diaphragm, stomach, bowel). Isolated injury of the normal spleen can occur only when the diaphragm during the moment of injury is fixed in deep inspiration.

The diagnosis is extremely difficult and the demand that in all perforating injuries of the lower left thoracic wall and exploratory thoracotomy should be performed is therefore entirely justified. In bullet wounds splenectomy is probably always indicated; in stab wounds, however, suture can be performed in many cases.

Abscess of the spleen may occur either because of suppuration of a splenic hæmatoma or in the course of infectious diseases and is induced either by trauma or by an embolic infarct. These abscesses are characterized by their tendency to sequestrum formation. The early symptoms are not characteristic and consist of fever and chills. Pains in the region of the spleen radiating to the shoulder occur only after the abscess reaches the capsule. If the

seat of the abscess is in the upper part, the diagnosis is difficult as early involvement of the left pleura takes place. If the abscess is developed in the lower pole, a palpable splenic tumor soon appears. Fluctuation rarely occurs, likewise respiratory rubs, as the diaphragm is more or less fixed reflexly, but if they do occur are of deciding significance. Leucocytosis although frequently present is of value only in typhoid abscess. Puncture of the spleen is not without danger and should be performed only on the operating table where operative procedures may follow immediately. The prognosis of the operation is good if performed early.

Of the cysts, blood cysts are the most common, being however, not true cysts. They are always single. In contradistinction to these are the multiple serous and lymph cysts. Objective signs: splenic tumor with irregular nodular surface, fluctuation rare, rubs are frequently heard due to perisplenic adhesions. No diagnostic blood changes are present. The prognosis in general is favorable except in suppuration and ruptures. The best surgical procedure is resection; in very large cysts with not too firm adhesions splenectomy must be considered; in very large cysts with firm adhesions, incision and drainage must suffice. Echinococcus cysts of the spleen are unilocular. They develop most commonly in the center of the organ, pushing both poles away from the center. This gives the organ a characteristic long-drawn-out shape. If hooklets are present, the diagnosis is clear. Exploratory puncture is advised against on account of the danger. Operative treatment consists in opening the cyst widely, extracting the mother membrane, and employing wide tamponade. To shorten convalescence it is advisable to bring the edges of the cavity together with sutures thus eliminating it.

Of the malignant tumors of the spleen sarcoma alone demands surgical interest. The diagnosis is made in the presence of rapidly developing, hard, nodular tumors in the absence of blood changes, fever, fluctuation, and malaria, but accompanied by severe pains due to tension of the capsule and traction on the ligaments. Recurring malaria is the most frequent cause of tumor-like hyperplasia of the spleen. The malarial spleen as a rule assumes enormous dimensions; its consistency is firm and the cut surface has the appearance of raw meat. Around it firm, but highly vascular adhesions are formed, especially at the lower pole. Pressure symptoms as a rule are mild; but the dystopic spleen by traction on its ligaments causes severe pain. The diagnosis as a rule is not difficult when the history and the characteristic form of the tumor are considered. Extirpation should be undertaken only in the presence of severe disturbances and in which the upper pole lies below or only a little below the edge of the costal arch. Partial ligature of the vessels of the pedicle is technically as difficult and has not proven practical. Splenopexy likewise has not found many adherents. The occurrence of an isolated tuberculous splenomegaly has been proven to exist but is

relatively rare. That occurring in the miliary form of tuberculosis develops slowly and may cause quite an enlargement of the organ which at times is nodular. The general condition is not materially affected in contradistinction to the splenic pseudo-leukemia in which the general condition with similar enlargement is severely affected. The diagnosis has rarely been made. The increase of the red blood cells (hyperglobulia) described by Rosengart is not pathognomonic. The treatment should be splenectomy performed as early as possible; it may be impossible in the presence of extensive adhesions in advanced cases. It is advisable to suture the spleen to the abdominal wound to establish drainage.

A wandering spleen usually occurs in the presence of diseased conditions and enlargements and especially during pregnancy. Sudden torsion of the pedicle causes stormy symptoms similar to torsions of ovarian cyst pedicles. In the presence of severe symptoms surgical treatment is indicated in a wandering spleen; splenectomy for markedly diseased spleen except in leukemia and splenopexy according to Bardenheuer for a small wandering spleen. Surgical intervention is contraindicated in leukemia, anemia splenica infantum, and in the splenomegaly of amyloid disease. Of the idiopathic splenomegalies Banta's disease alone interests the surgeon.

NEUPERT.

Giffin: Clinical Observations Concerning Twenty-Seven Cases of Splenectomy. *Am. J. M. Sc.*, 1913, cxlv, 781.

By Surg., Gynec. & Obst.

The histologic examination of the spleen in cases of splenic anemia reveals no constant histological picture, and the author here reports the clinical findings in the twenty-seven cases in which splenectomy has been performed in the Mayo Clinic. For convenience these are divided into three groups: (1) those which conform closely to the clinical syndrome of splenic anemia, eighteen in number; (2) cases presenting clinical features which suggest that the splenomegaly was a part of a more or less widespread infection, and secondary rather than primary; (3) miscellaneous cases. In the study of these cases the author shows twenty-seven cuts outlining the splenic tumor and tabulates the post-operative results, giving the pathology, blood counts and all clinical data concerning them.

The author concludes that a proper grouping of cases showing marked splenic enlargement with an anemia of the secondary type is at present quite impossible, and that the clinical features form the best basis for a tentative classification. It assists especially in recognizing clean-cut and uncomplicated cases of splenic anemia. The review indicates a possible relationship between gall-bladder disease and splenomegaly and indicates more clearly in uncomplicated cases of splenic anemia that a large percentage of cases return to excellent health after splenectomy, but in cases complicated by other diseases of an infectious nature the value of splenectomy is questionable.

H. A. POTTS.

SURGERY OF THE EXTREMITIES

DISEASES OF BONES, JOINTS, MUSCLES, ETC.
GENERAL CONDITIONS COMMONLY
FOUND IN THE EXTREMITIES

Cluzet and Dubreuil: Action of the X-Ray on the Development of Callus. Comparative Study of Radiographic and Microscopic Aspects of Callus (Action des rayons X sur le développement du cal. Etude comparative des images radiographiques et microscopiques du cal). *J. de physiol. et de pathol. gen.*, 1913, xv, 367.
By Journal de Chirurgie.

In the author's experiments fractures were produced in the legs of dogs and then immobilized in plaster. Some were treated with Röntgen rays and the dogs killed after a variable time in order to determine the influence of the rays upon the formation of callus. Others were radiographed but not subjected to long exposure and were used to determine the histologic significance of the radiographic appearance of new-formed callus. He concludes:

Cartilaginous callus uniting a fracture is not recognizable by shadows.

The union may appear firm upon clinical examination as a result of fibrous or cartilaginous callus, and yet the radiograph may resemble that of a recent fracture.

In a dog not exposed to treatment with the rays, the bony callus makes its appearance between the eleventh and seventeenth day. In one treated by long exposure to the X-rays on different aspects of the fracture, the bony callus is delayed until the forty-first day.

If only one aspect of the fractured surface has been exposed to the rays the callus appears first on the opposite side.

These effects of the rays are the same whether the exposures are made before or after the fracture, but the formation of the callus is only delayed; it finally follows its normal course.

PIERRE CRUET.

Machard: The Use of Tuberculin in Osseous Tuberculosis in Children (De l'emploi de la tuberculine dans la tuberculose osseuse chez les enfants). *Rev. méd. de la Suisse romande*, 1913, xxxii, 333.

By Journal de Chirurgie.

Machard has experimented with TBk (Beranek's tuberculin) in twenty-one cases of osteo-arthritis tuberculosis in children from four to fourteen years of age. One fungus osteo-arthritis of the knee, ten coxalgias and six spondylitis cases were treated by focal injections and four by hypodermics. Five cases treated focally resulted satisfactorily, four had doubtful results and seven, negative. In the fungus osteo-arthritis of the knee, the condition was aggravated. The successful cases would undoubtedly have cleared up as rapidly under the usual treatment.

In those treated locally the amount of local reaction and the changes in temperature varied greatly with the same dose, showing no relation to the amount or quality of tuberculin used. In fact, the

temperature changes in patients who were not getting tuberculin and in the periods of rest of those who did get injections were just as great as in those who were receiving regular treatment. Machard is of the opinion that tuberculin treatment of osteal and articular tuberculosis in children can not replace the other conservative treatment and in fact is dangerous in certain cases.

Sahli advises seeking a negligible local reaction, whereas Coulon advises a strong local and general reaction. It seemed difficult to find the amount of TBk necessary to produce a negligible local reaction.

VALLETTE stated, in discussion that Machard's technique differs from that used by Coulon. Generally speaking, Machard uses weaker doses at four-day intervals, whereas Coulon makes his injections every eight days. Further, Machard treated cases of vertebral tuberculosis in which the site was hard to bring in contact with the TBk. In the fungus osteo-arthritis case favorable results might have been obtained by subcutaneous injections. Coulon has had good results in adults as well as in children. Vallette believes that Coulon's positive cases are very encouraging, and that more work should be done along this line.

J. DUMONT.

Vulpis: Treatment of Surgical Tuberculosis by Means of Light Rays (Über die Lichtbehandlung der chirurgischen Tuberkulose). *München. med. Wchschr.*, 1913, lx, 1079.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the physiological influence of light, with special reference to its remote effects. He reviews the technique of heliotherapy, used by Rollier for its general systemic effect, and by Bernhard for its local effect, on the diseased area in cases of surgical tuberculosis. Clinical experience at the Rappenan sanatorium has convinced the author that heliotherapy can be as successfully applied in the lowlands as in high altitudes if one takes advantage of the artificial light rays. The author employs the electric arc light as well as the quicksilver vapor light and the quartzlamp.

He believes that light therapy is destined to take an important place in the treatment of surgical tuberculosis. "We can state positively that light therapy in its present form in the lowlands can compete with heliotherapy of the highlands. This has been made possible by the ease with which natural and artificial light can be combined. When the two methods are compared it cannot be disputed that artificial light has certain advantages. It is always at our disposal and not dependent upon weather conditions. The amount and intensity of the light can be regulated, which is not true of the ever varying sunlight with its uncertain ultraviolet constituents. The quartzlamp furnishes a richness in ultraviolet rays which surpasses even that of natural sunlight of the highlands."

BRANDES.

Müller: A Case of Acute Bone Atrophy (Über einen Fall von akuter Knochenatrophie). *Deutsche militär. Ztschr.*, Berl., 1913, xlii, 387.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Müller treated a case of acute bone atrophy for many months and states that it is desirable in such a condition to have X-ray examinations taken as early as possible. The diseases with which this may become confused are chronic articular rheumatism, neuritis, traumatic joint conditions, phlegmons of the soft parts, herpes zoster, etc. The typical findings upon X-ray examination are the involvement of the base and head of the bones, not of the diaphysis, as is observed in chronic atrophy due to inactivity or senile atrophy.

The author believes with Sudeck and Kienböck that acute bone atrophy is due to tropho-neurotic reflex disturbances and recommends, if the diagnosis is correct, energetic passive motion instead of the usual treatment of rest and wrapping the limb in cotton. In his own case, the author obtained also a good functional result within a short time. In conclusion, he points to the fact that in spite of the good functional result obtained, the bone atrophy persisted unchanged. According to his point of view, the affection consists not merely in a rare action of the bone salts, due to the prolonged atrophy, but in a solution of the entire bony framework. KNOKE.

Molineux: The Multiple Brown Tumors Found in Osteomalacia (Über die multiplen braunen Tumoren bei Osteomalacie). *Arch. f. klin. Chir.*, 1913, ci, 333. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports in detail three cases which he classifies as osteitis fibrosa atrophica on the basis of pathological-histological studies in contradistinction to the osteitis fibrosa hypertrophica in which an increase of bony substance takes place. He emphasizes the fact that even in view of the appearance of the brown giant-celled sarcoma-like tumors there is no essential difference between these two forms of the disease. The different forms of bony malformations he attributes to loss of balance between the bone-forming cells and the bone-destroying cells, caused either by an irritation or a destruction. As the cause of the disease is still unknown it is of importance to know that the author in three cases found a definite hyperplasia of the parathyroids. The findings reported first by Erdheim are therefore confirmed. In the interpretation of the brown tumors the author's views coincide with those of Lubarsch and Rehman. He considers the epulis-like tumors not as definite new growths but as hyperplasias incident to the irritative and destructive processes occurring in the bones. STAMMLER.

Domingo: Cystic Tumor of the Head of the Femur (Tumeur kystique de la tête du fémur). *Rev. de l. Hosp.*, Montevideo, 1913, vi, 3.

By Journal de Chirurgie.

The patient some years before coming under observation had violently twisted his left lower limb,

injuring the hip. He was confined to bed for one month and was not able to walk for five months. Four years ago the patient fell from a horse upon the left hip. Following this accident he experienced pains in the inguinal region. He began to limp and one year ago noticed a swelling at the outer part of Scarpa's triangle which steadily increased.

Examination showed a swelling in the above named region and atrophy of the limb. Movements were painful. Immediately inferior to Poupart's ligament there was a hard irregular mass of about 8 cm. in diameter; also several small glands. The great trochanter was increased in size. X-ray showed a tumor the size of an orange, surrounding the head of the femur, the anatomical neck and upper part of great trochanter.

Operation. Antero-external incision. The tumor was opened and bloody fluid escaped; the cavity was lined with loose soft tissue and in the wall were smaller cavities giving the cyst a sponge-like appearance. The cavity was packed, and following the operation, it contracted and healed. Histological examination of the bony fragments revealed a cystic enchondroma. The author entered into a full consideration of cysts of the long bone. SALVA MERCADÉ.

Brooke: The Treatment of Gonorrhœal Arthritis. *Hahnemann. Month.*, 1913, xlviii, 417.

By Surg., Gynec. & Obst.

Results in these cases are not good. The author had all degrees of limitation of motion and believes from the literature that such is the usual result in the severe cases. There is no such thing as an idiopathic arthritis, but a primary focus always exists with a definite period of metastasis for each organism — streptococcus, 24–28 hours; grippe, 9 days; gonorrhœa 19 to 22 days.

Gonorrhœal arthritis gives sudden onset involving several joints of which all clear up but one. Thus it differs from tuberculosis, in which the onset is slow and never under three weeks after injury. The knee is the most frequent site of gonorrhœal arthritis. Destruction is due to the accumulation and pressure of products of infection in the capsule.

Brooke advises aspiration and injection of 5 to 10 cc. of 2 per cent formalin glycerine at intervals of from a day to a week. He secures extension by Buck's adhesive dressing with weight enough to separate the joint surfaces and relieve pain; opens and clears out the joint, if aspiration is impossible on account of thick fluid; considers vaccines next in importance to surgical measures; and uses Neisser mixed vaccine from 50 to 500 million at a dose. Bier's hyperæmia is of use in subacute stages. C. E. WELLS.

Edberg: Purulent Arthritis in Sucklings and Its Importance in Future Deformities (Om purulenta spädbarnsartriter och deras betydelse för framtida deformiteter). *Hygeia*, 1913, lxxv, 203.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports four cases of purulent coxitis, one case of omarthrititis, one case of simultaneous

omarthrititis and gonitis, and one case of bilateral gonitis. The bacteriological examination verified the presence of pneumococci in a three weeks' old coxitis; staphylococci (pyog. aur.) in three cases; viz., in a five weeks' old coxitis, a ten days' old omarthrititis and a five weeks' old omarthrititis and gonitis; and streptococci in a two months' old bilateral gonitis. Two cases of coxitis (one three weeks old and one 1½ years old) were not examined bacteriologically, though the author is of the opinion, for valid reasons, that both were due to septic infections. The author's views in this connection are in direct opposition to those of Rovsing, who in 1896 asserted that in sucklings many cases of joint inflammations that are described as septic are in reality of a tuberculous nature. The author corroborates the prevailing conception as to the significance of acute enteric catarrh in bone and joint inflammations. He is of the opinion that the "catarrhal synovitis" of the old Volkmann school is the usual pathological anatomical form, notwithstanding the fact that osteal involvement is observed occasionally. The author bases his opinion upon the rapid healing frequently following slight arthrotomies. None of the author's cases ended fatally; the suppuration terminated after a very small incision. Fortunately, the author was able to observe the cases described for several years. None of the coxitis cases showed a luxation at the time of the first operation; in two cases of coxitis complete luxation developed; in a third, a subluxation; in a fourth, coxa vara. According to the author, the luxations developed less frequently in the acute stage of the septic coxitis. Invariably these coxitis developed early para-articular abscesses; the exudate of the joint perforated early and the capsules' expansion properties were diminished. It is not easy to assume that the luxation depends primarily upon the distension, in case the former does not occur before the capsule is perforated. In sucklings there are no septic destructive luxations observed, like those that occur in osteomyelitic coxitis in a somewhat advanced age. The most remarkable observations brought to light by radiographic examinations are the extensive atrophy and deformity of the entire intra-articular part of the extremity. There is a marked incongruity between the head and the extremities in this respect, which is noticed with increasing force and frequency as the extremities are approached. This condition is influenced by motion, muscular forms, and the burden imposed — all of which tend to induce luxations.

The author points to the possibility of a radiographic differential diagnosis between congenital luxations of hip-joint and those resulting from coxitis occurring during the suckling age. The author claims priority for these studies, which were first described by Drehmann.

In two cases of luxation of the hip-joint operative reposition was successful. In none of three cases of gonitis which the author could observe, was there a permanent injury following upon a purulent arthri-

tis. These cases present a favorable prognosis, presuming early and correct treatment.

In a subsequently examined case of omarthrititis, atrophy of the head of the joint and a soft crepitation were established; but no tendency toward an habitual luxation was noted.

GIERTZ.

Greiffenhagen: The Mobilization of an Ankylosed Elbow-Joint by Means of Periosteal Transplantation (Über Mobilisierung des ankylotischen Elbogengelenks durch freie Periosttransplantation). *St. Petersb. med. Ztschr.*, 1913, xxxviii, 93.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

For the mobilization of an ankylosed elbow-joint, Greiffenhagen advises the interposition of periosteal flaps which may be taken from the tibia. In the removal of the periosteum it is advisable to include cortical fibers. The flaps are laid and fixed upon the freshened bone surface with the osteoplastic layer upon the sawed surface. The outer wound is closed almost completely, a small drainage tube being inserted in one angle. The arm is kept quiet. After a few weeks passive motion is begun. The defect in the tibial periosteum is closed immediately and no disturbance occurs. The author described three cases.

HOHMEIER.

Marchal: Traumatic Lesions of the Meniscus of the Knee (Lésions traumatiques des ménisques du genou). *Bull. Ass. med. belge d. accidents du travail*, 1913, ix, 241.

By Journal de Chirurgie.

Marchal reports eight cases of traumatism to the knee resulting in injury to the internal meniscus. From these cases and those in the literature he has come to the following conclusions:

1. Injury to the meniscus is produced by direct or indirect traumatism caused generally by sudden torsion of the knee.
2. The internal meniscus is usually affected.
3. The symptomatology is varied: (a) Localized pain over the meniscus; (b) hydro-arthritis, slight or extensive; (c) fixation of the joint as by a foreign body; (d) limitation of motion, especially extension; (e) abnormal mobility of the knee.

Extirpation gives better results than suturing of the meniscus. The operation is simple but strict asepsis must be employed. The author advises early exploration in all cases of chronic hydro-arthritis so that atrophy of the triceps may be prevented.

J. DUMONT.

Bartow and Plummer: Further Observations on the Use of Intra-articular Silk Ligaments in the Paralytic Joints of Poliomyelitis. *Am. J. Orth. Surg.*, 1913, x, 449.

By Surg., Gynec. & Obst.

The authors have described in a previous paper a technique designed to give better control of the more or less flail joints following poliomyelitis. In brief, the procedure is to so introduce paraffined silk into the joint as to hold the parts in correct weight-bearing posture, and at the same time allow of a

certain amount of movement. The silk is expected to act as a mechanical agent in holding the correct posture for a time, but, eventually, to become invested with a strong covering of fibrous scar tissue, which will act as an interarticular check ligament, in effect somewhat like the normal crucial ligaments of the knee.

The operation as described is as follows: For example, a paralytic valgus with drop foot; a small incision over the inner malleolus down to the bone. At this point a specially designed curved drill, diamond pointed and with an eye in the point, is entered into the bone and forced downward and forward, traversing malleolus, astragalus, scaphoid and inner cuneiform. At the point of emergence, a small incision is made and one or more strands of the silk led back through the tunnel in the bones. A second insertion of the drill at the upper point is carried to the lower, not through the bone, but through the integument around the joints, and the other end of the silk strand is led back to the first point, forming the loop. This is pulled up tight and tied, pulling the foot into a slight varus and dorsoflexion. A plaster splint retains the position for from 12 to 20 weeks, and a modified shoe is then applied and walking begun.

This procedure may be varied to include both sides of the foot for drop, into the os calcis for calcaneus, or through the condyles and the heads of tibia for flail-knee; also through the anterior superior spine of the ileum and greater trochanter for paralysis of internal rotators; also through the acromion and head of humerus for paralysis of the shoulder and subsequent luxation of the humeral head.

The authors state that, all told, over 100 joints have been so treated, and in almost all of these there has been marked improvement in function and position.

Earlier cases relapsed, but a longer plaster fixation, allowing longer time for the scar envelope of the silk to form, corrected this detail.

There have been no infections, and in only three cases was it necessary to remove the silk, and that only after a period of from three to six months. In all these latter cases there was no sign of infection. The silk was partially disintegrated, and after removal the corrected posture was well maintained by the interarticular scar.

The authors wish to call attention to the necessity of absolute asepsis in the handling of the silk; also all secondary deformity-producing factors must be recognized and properly dealt with. Contractures, strong opposing muscles, etc., must be eliminated. It frequently happens that a knock-knee complicates a flail valgus foot, and it is essential to correct the knee posture as well as the foot. Other such combinations will suggest themselves.

The authors state that they feel that this measure will find a very useful field in the early surgical treatment of these lesions, as there has been no destruction of joints, and any late returning muscle power will not be interfered with. It also obviates

a long and protracted period of apparatus treatment, and furthers the use of developmental exercises.

The authors do not advocate this method as the only treatment for flail joints, but in properly selected cases have found it the best method and very useful in combination with some of the other operative procedures.

Tourneux: Sarcomas of the Tendon Sheaths (Les sarcomes des gaines tendineuses). *Rev. de chir.*, 1913, xlviii, 817. By Journal de Chirurgie.

The author reviews 93 cases of sarcoma of the tendon sheaths; in 66 the tendon sheaths of the upper limbs were involved and in 27 those of the lower. The tendons of the hand, especially the flexors, were affected most commonly. Trauma is often the original cause and it sometimes starts a rapid growth in already existing tumors. The tumors are lobulated, reddish yellow in color and very vascular. The connective tissue forms are hard, the cellular forms soft. The tendon is last invaded, but the muscle and cellular tissue offer but slight resistance. Degeneration is rare and visceral metastases uncommon. There are round, epithelioid and giant cell sarcomas; myo-, fibro- and alveolar sarcomas, these by some authors being classed as endotheliomas. The giant cell form is not common.

The beginning is slow and insidious; rapid growth indicates malignancy. The tumor is at first interlobular, hard or elastic and not reducible. The tendons and skin are involved late in the process. Pain is a late and not marked symptom. When the tumor becomes malignant it grows rapidly, invading neighboring tissues and becoming generalized by the blood-stream. Generalization occurred in only six of the cases cited. Recurrence is quite frequent (21 cases) and even the giant cell sarcomas recur. They must be distinguished from arthrosynovial cysts, exostoses and osteosarcomas. Muscular sarcomas are differently located. The treatment should be surgical and radical if the tissues are infiltrated (amputation or disarticulation).

In fourteen cases of round cell sarcoma there were eight recurrences usually with generalization and in sixteen cases of the epithelioid form, six recurrences. These recurrences should be treated by secondary amputation. J. OKINCZYC.

Spieß: The Giant-Celled Sarcomas Originating in the Tendon-Sheaths and Aponeuroses (Zur Lehre der von Sehnnenscheiden und Aponeurosen ausgehenden Riesenzellensarkome). *Frankf. Zschr. f. Pathol.*, 1913, xiii, 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Spieß studied forty-eight cases reported in the literature and four of his own observation in regard to the pathologic-anatomic characteristic of these tumors (for the details the original work must be consulted) and on the strength of his studies came to the conclusion that they are a variety *sui generis*. They arise principally from the tendon sheaths of the fingers and from the palmar aponeurosis.

Etiologically no definite cause has been found, and chronic granulation processes can safely be excluded. The development takes years, yet the tumors never become larger than an egg. The tumor is definitely benign; they should not recur after thorough removal. Their pathologic-anatomic characteristics are as follows: 1. They contain a fairly large amount of hemosiderin. 2. There are many multinuclear giant cells present. 3. The so-called xanthoma cells are found. 4. The structure is ragged. The tumor is sharply limited by a connective tissue capsule. It resembles epulis considerably, especially if many giant cells are found. Spiess suggests the name "hemosiderin containing sarcoma gigantocellular xanthomatodes of the tendon sheaths and aponeuroses." KNOKE.

Fleissig: The Granulomata of Tendon-Sheaths Heretofore Defined as Giant Cell Sarcomata: Myelomata (Über die bisher als Riesenzellensarkome—Myelome—bezeichneten Granulationsgeschwülste der Sehnenscheiden). *Deutsche Ztschr. f. Chir.*, 1913, cxvii, 239. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Fleissig had occasion to observe two cases of tendon-sheath tumors during the past two years. The large majority of such tumors have previously been considered giant-celled sarcomas (myelomas). New detailed investigations have shown, however, that these tumors lack the principal diagnostic points of neoplasms, such as polymorphism, polychromasia, destructive invasion of surrounding tissues and mitosis. For the recognition of such affections the macroscopic appearance, such as their small size, their ragged structure and their yellowish marbled appearance, is important. In support of his view Fleissig cites several illustrative cases from the literature. These granulomata take their origin more frequently from the tendon sheaths of the fingers, especially from the flexor tendons, more rarely from the tendon sheaths around the malleoli and the radiocarpal joints. They do not recur. The conclusion may be drawn that no mutilating operations are necessary, but that the careful extirpation of the diseased tissue suffices. KNOKE.

FRACTURES AND DISLOCATIONS

Dejouanny: Fracture and Dislocation of the Internal Meniscus of the Knee; Excision; Cure (Fracture et luxation du ménisque interne du genou; méniscectomie; guérison). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 484. By *Journal de Chirurgie.*

This communication by Dejouanny was presented by Lejars. The latter pointed out the rarity of operation for lesions of the meniscus in France which is in marked contrast to its frequency in England.

The case operated upon by Dejouanny was that of a cavalryman who was thrown from a horse and whose leg was forcibly flexed and rotated outward.

He was soon able to go about his work but frequently slight movements caused the limb to become locked in semiflexion and the knee joint full of fluid.

A diagnosis of a traumatic lesion of the internal meniscus was made. This meniscus was easily removed and found to consist of two fragments of fibro-cartilage 26 mm. and 25 mm. in length; the posterior fragment being easily folded onto the anterior. The anterior fragment was attached to the tibia; the posterior was free in the joint cavity. A perfect recovery was obtained.

Lejar mentioned several cases in which he had made a diagnosis of trauma to the internal meniscus and reported one of these on which he operated. Here there was merely a very movable cartilage which was removed. It was still too soon to judge regarding the result.

To make a diagnosis of this condition there should be a sudden painful fixation of the knee followed usually by a hydrarthrosis, and a painful point and ridge in the region of the meniscus when the limb is in extension but disappearing when it is flexed. A total meniscectomy is the only manner in which to obtain a permanent cure even if it is only an abnormally movable cartilage.

Demoulin, Michon, Arrou, Kirmisson, Tuffier, Quénu, Maclaure and Lejars then reported series of cases of injury to the internal meniscus and discussed the etiology, diagnosis and treatment of the condition. J. DUMONT.

Gelinsky: The Treatment of Fracture of the Calcaneum and Injuries to the Middle Bones of the Foot With Extension (Die Extensionbehandlung bei Calcaneumfraktur und den Verletzungen der Mittelfussknochen). *Zentralbl. f. Chir.*, 1913, xl, 809. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

In oblique fractures of the os calcis in which the arch has sunken, as in flat foot, the author advises tendo achillis tenotomy with extension of the foot by means of a thin board fitted to it. This is attached to the anterior part of the foot with adhesive plaster and to the heel by a strong silver wire which by means of a thick, round, straight needle is pulled through the angle between the origin of the tendo achillis and the tubercle of the os calcis. In the hollow of the arch a rubber sponge is placed. Extension is applied by means of a cord applied to the middle of the board. After two weeks the sponge is removed and the hollow is filled up with plaster of Paris, the board is fastened to a plaster shoe and the patient is allowed to walk about. A similar method without tendo achillis tenotomy is applicable to malleolar fractures and all direct fractures of the middle part of the foot. STREISSLER.

Hardouin: Complete Backward Dislocation of the Knee; Cure by Continuous Extension (Luxation complète du genou en arrière; guérison par l'extension continue). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 806. By *Journal de Chirurgie.*

Hardouin reports the case of a jockey who was thrown from his horse and suffered a complete backward dislocation of the knee. This was easily reducible, but would not remain in place. Four and

then six kgm. extension weights were applied, which kept the knee in position. After 15 days the extension was removed; after 34, the patient walked, and after 45, he left the hospital. Six weeks later he was able to ride in races.

Hardouin then made some clinical and experimental researches and found that there were two types of backward dislocations, one in which the posterior cervical ligament alone is destroyed and one in which all the ligaments are torn. In the first type the dislocation can occur only backward; in the second the head of the tibia can be carried forward and also sideways.

J. DUMONT.

SURGERY OF THE BONES, JOINTS, ETC.

Murphy: Old Ununited Fracture of Anatomic Neck of the Femur; with Suggestions for the Immediate Treatment of this Fracture. *South. M. J.*, 1913, vi, 387. By Surg., Gynec. & Obst.

The author first discusses the causes of non-union of fragments in fracture of the neck of the femur, under all forms of treatment, and concludes by saying that there are certain fractures of the neck which must result in non-union, no matter what form of treatment is employed, short of operative procedure, the reason for this being the interposition of tissue between the ends of the fragments. It is in these cases that an open operation is positively indicated. The operator follows no single plan in exposing the seat of fracture, but in certain cases uses a longitudinal incision, and in others a U-shaped incision. When the trochanter must be removed the U-shaped incision is employed and a Gigli saw is then passed beneath the muscles attached to the trochanter, and the trochanter divided. By adducting the leg and turning the foot outward the fractured end of the neck of the femur and the shaft are easily exposed. If the trochanter is not to be removed the incision should be a straight one. In this case the fascia lata is divided, and the fibers of the gluteus medius muscle are separated, giving one immediate access to the fracture of the neck of the femur.

When the interposing tissue is removed, the ends of the fragments are freshened and approximated. Two or more 8, 10, or 12-penny wire nails are driven through the neck into the head from the shaft side of the bone. The trochanter, if it has been removed, is then nailed into position with one wire nail. The soft parts are sutured, the wound closed without drainage. No cast is applied. Both legs are then placed in a travois splint so as to insure abduction of the affected leg. The author emphasizes the importance of this splint in order to maintain abduction. A number of illustrations and X-ray pictures follow, explaining the author's methods.

The plaster of Paris cast, including both hips with abduction of both legs, meets the conditions in impacted fractures, but it is very inconvenient to the patient. The so-called "railway splint" is likewise deficient. However, no splint, even with extension, abduction or lateral traction, can secure union of the

fragments when the capsule or other soft tissue lies between. The amount of traction should vary with the musculature of the individual, usually between 15 and 35 pounds. The author advises the use of the old fashioned diachylon mole-skin plaster, as rubber adhesive plaster frequently produces an eczema.

The author cautions against applying the Buck's extension so that pressure upon the external popliteal nerve may not occur where it passes around the neck of the fibula, lest footdrop result. In applying the cast a window should be cut at this point.

In from eight to sixteen weeks, in adults, bony union will take place between the fragments of the neck of the femur. In children from five to eight weeks are sufficient to produce firm bony union.

In all of this bone work strictest asepsis must necessarily be maintained. FREDERICK G. DYAS.

May: The End Results Following the Radical Operation for Knee-Joint Tuberculosis in the Adult (Über das Endresultat radikal operierter Kniegelenktuberkulosen bei Erwachsenen). *Deutsche Ztschr. f. Chir.* 1913, cxxii, 171.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Since Brandes reported the results of operated cases of knee-joint tuberculosis up to the fifteenth year, the author now renders the results in those over fifteen. Among seventy-seven cases, amputation was performed seventeen times (eight times primarily and nine times secondarily). In the three arthrectomies one excellent result was obtained in an eighteen-year-old girl after excision of the fistula, excochleation of the synovial membrane, drainage and hyperæmia. It is now ten years since the onset of the disease; her gait is perfect, her movement complete and she is able to dance. Of the forty-eight resections which did not need a secondary amputation, the author was able to examine thirty personally. The operation of choice was the curved method of resection according to Helferich. By means of eight instructive tables the author gives the clinical course, findings, duration and result and treatment.

Final results: A total of seventy-seven operations were performed on sixty-seven adult patients; twenty-three of these died, seventeen of tuberculosis. Of fifty-seven cases of resection fifty-five were followed up. Of these, thirty-three are living and cured, with firm ankylosis; only two are unable to perform their labor; nine died, but the condition at the time of death was cured; nine had to be amputated secondarily and four died with the condition not cured.

EUGEN SCHULTZE.

Göbell: The Treatment of Ischæmic Muscular Contraction by Free Muscle Transplantation (Zur Beseitigung der ischämischen Muskelcontractur durch freie Muskeltransplantation). *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 318.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Following a redressment on account of a flexion contracture of the right elbow after an extensive

fracture, an ischæmic contracture involving the second, third, fourth and fifth fingers set in. In mid-position of the hand almost complete flexion of the fingers was present, which increased with dorsal flexion. Göbell attempted to perform a free transplantation of the muscles which still contained their nerve supply. At the operation the forearm fascia was cicatricially contracted and fibrous, the musculus palmaris contracted; the flexor sublimis showed marked, and the profundus, very marked, fibrous degeneration, so that the knife grated when the muscle was cut. After the flexors were severed 2 cm. above the tendinous part, the fingers relaxed and could be straightened. In the defects 5-6 cm. long the following muscle pieces were implanted: the upper end of the sartorius into the flexor profundus, that part of the external oblique belonging to the tenth intercostal nerve into the sublimis. The transplanted nerves supplying the muscles were implanted into the median nerve after stimulation to determine the presence of motor fibers. The fascial defect was supplied from the fascia lata. Under after-treatment according to Jores with faradization twice daily, improvement during the four months had progressed so far that the extended fingers could be flexed to touch the palm of the hand, and finally the entire function of the fingers returned.

The result could not be attributed to the lengthening of the muscles, as their injury was too severe, and as improvement occurred only after several months. On the other hand, the transplant could not have retained its function, as the electrical stimulation never caused an isolated contraction of the transplant. According to the experiments conducted by the author, it is highly probable that the transplant became necrotic to a large extent, and the continued elastic traction due to the contraction processes caused a marked stimulation and regeneration of the remaining muscle tissue and also probably of the transplanted tissue. The method of free muscle transplantation in such cases is superior to the resection method of Henle-von Mikulicz and to the recently published corpus resection method of Klapp.

SIEVERS.

Müller: The Operative Treatment of Lame Feet
(Beitrag zur Operation gelähmter Füße). *Zentralbl. f. Chir.*, 1913, xl, 812.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

I. Operation for pes calcaneus paralyticus. In isolated paralysis of the gastrocnemius and soleus muscles, Müller uses the flexor longus hallucis on the inner side, as it is farthest posterior, is powerful and can be utilized without causing much disturbance in the great toe. On the outer side he uses the peroneus brevis and not the longus, as the latter is the antagonist of the tibialis posticus. After isolating both tendons

he carries them through two holes made in the calcaneus to the median and lateral side and draws them taut so that the foot rests in plantar flexion. He then sutures the central end of the flexor hallucis to the tendon of the peroneus brevis, and the central end of the peroneus brevis to the tendon of the flexor longus hallucis, so that he obtains a muscle with two heads. The tendo achilles is then shortened by folding it upon itself. The foot is fixed in plantar flexion for four or five weeks.

II. Arthrodesis of the talotarsal joint in paralytic feet. The disturbing shakiness in the talotarsal joint occurs either as varus or valgus position of the foot and not in the talocrural joint, which forms a broad roll. Müller stiffens the Chopart and talocalcaneal joint by adding a resection of the cartilages. He thus obtains a foot which in its posterior part is quite firm, as the talus, calcaneum, navicular and cuboid bones then form a firm bony mass, pronation and supination being excluded. The foot can develop normally.

SCHMITZ.

Vedova: Supracondyloid Osteoplastic Amputation of the Femur for Movable Artificial Legs
(Amputation fémorale supracondylienne ostéoplastique à capuchon cinématique). *Revista osp.*, 1913, iii, 337.

By Journal de Chirurgie.

In the case of the lower limb resistance to pressure is the chief quality to be sought for. The osteoplastic occlusion of the medullary canal and the active mobility of the soft parts between the bone and artificial limb are of great importance. Different methods of obtaining this resistance were studied, especially that of Gritti.

In the Gritti operation the cut surface of the bone is protected by turning back the patella and holding it in place by suturing its ligaments to the flexor tendons (Rioblanco's method). The author believes that the stump would be much more serviceable if a movable osteocutaneous flap were placed below the bone stump, being made movable by the flexors and extensors of the leg.

Instead of removing the patellar cartilage, as Gritti does, Vedova leaves the patella intact. He makes a new cartilage-covered end for the femur by transplanting cartilage-covered bone from the condyles and trochlea over the bony stump. To do this transplantation successfully, the two pieces must be cut exactly perpendicularly and the femur cut obliquely from before backward. The patella is then reflected to cover the stump as in the Gritti operation.

The author has tried this technique in only one case and has been able to follow it for only a short time. He is, however, favorably impressed by the good location of the plastic flap, the persistent mobility of the patella and the good preservation of the muscles attached to it.

AMEUILLE.

ORTHOPEDIC SURGERY

DISEASES AND DEFORMITIES OF THE SPINE

Henderson: The Operative Treatment of Tuberculosis of the Spine. *St. Paul M. J.*, 1913, xv, 277. By Surg., Gynec. & Obst.

A brief résumé is made of the conservative treatment and the principles underlying it. The author refers to the importance of securing a speedy bony ankylosis in any tuberculous joint. This is the object of the treatment in tuberculosis of the spine. The technique of the Hibbs' and Albee operations is described. Any operation which will hasten the cure in these cases should be looked upon with favor.

In 1912 there were 35 cases of Pott's disease seen in the Mayo Clinic. Of these, 6 were operated on. The Hibbs' operation was used in three and the Albee operation in three. The age of the oldest patient operated on was 42 and that of the youngest, 3. The carrying out of support by braces after the operation was just the same as if no operation had been performed. Three of the patients were cases not controlled by conservative treatment prior to operation. Their course since operation has been one of steady improvement. Recumbency on a Bradford frame for at least one month after operation was insisted on. Following this, the use of a Taylor brace was required.

A detailed report of each case is given. It is stated that the report is essentially preliminary, but the results are encouraging.

MALFORMATIONS AND DEFORMITIES

Ludloff: The Open Reduction of Congenital Hip Dislocation by an Anterior Incision. *Am. J. Orth. Surg.*, 1913, x, 438. By Surg., Gynec. & Obst.

The author describes a method for the reduction of congenital luxations of the hip in those cases in which manipulative treatment has failed, or has been followed by a more or less complete relapse. The causes for these failures the author seeks in the pathologic anatomical relations of the congenitally dislocated hips, and his technique is designed to overcome these difficulties. His findings would show that, although the head may be so manipulated that it is placed in position upon the acetabulum, when the thigh is in extreme abduction and outward rotation, there are strong forces which act to relaxate the femoral head when the position of abduction and inward rotation is approached. These forces would seem to lie in the tension of the very strong upper and lateral parts of the joint capsule, and the tension of the ilio-psoas, when the head is placed in its new position.

These factors, combined with the flat acetabulum and tissues forced under the head by manipulation, cause the relaxation when abduction is attempted, and would, in certain cases at least, prevent firm anchorage.

The chief steps in the operation follow: With the patient on his back and the pathological thigh at right-angled abduction, an incision is made parallel to the axis of the femur from Poupart's ligament about 15 cm. downward on the lateral border of the abductor longus, leaving the pectineus and great vessels on the medial side. The exposed capsule is incised, and the tendon of the ilio-psoas is separated from the lesser trochanter and retained for later lengthening. The incision in the capsule exposes the acetabulum with the pathologic limbus and infolded membranes lying in front of the head. Incision of the isthmus and the limbus will allow the head to correctly enter the acetabulum, but adduction will produce relaxation. An incision of the lateral and upper parts of the capsule along the inter-trochanteric line permits of a position of 45° adduction and inward rotation without relaxation. With the head in this position, the capsule is sutured as far as possible, the ilio-psoas attached, and the wound closed. In the author's cases a plaster of Paris splint maintained this position for eight weeks, when the patient was allowed to walk with a high shoe under the well foot.

The theoretical question of the weakening of the capsule by extensive incision and incomplete closure is considered, but the practical results would seem to show that a compensatory fixation follows the operation.

In the three cases cited in the paper, good results have followed. All were relapsed cases, but following the open operation the reduction has been maintained in one case, two years; in another, one year; and in the last, nine months. Some antetorsion has followed in all the cases.

The author concludes from his experience that this method best deals with capsule and muscle tension described above, and that some method of deepening the acetabulum and strengthening the capsule would still further improve the results of the reduction.

W. W. PLUMMER.

Campbell: The Causation and Treatment of Deformities Following Anterior Poliomyelitis. *Edinb. M. J.*, 1913, x, 501.

By Surg., Gynec. & Obst.

This paper, in two parts, takes into consideration the etiology of deformities in infantile paralysis as well as the means at our disposal for the prevention, amelioration and correction of deformities which remain as a result of this disease. The author divides the etiological factors into two classes:

1. The *trophic* or *unpreventable* deformities which comprise those which occur as a direct result of the complete destruction of the ganglion cells by which is cut off the trophic influence to the part.

2. The *preventable* deformities which appear any time after the paralysis. These are not due, except indirectly, to the paralysis but are brought about

by outside forces acting on the weakened parts; they are not caused primarily by unbalanced muscular action but by a loss of *tone*, the force of gravity or the pressure of the body weight being too powerful for the paralyzed, toneless muscles. The antagonistic muscles find themselves relaxed and therefore contract somewhat to take up a position in which they will regain their tone. After constant repetition of the deformity the new tone becomes normal and the muscles are unable to relax to their former position. Constant contraction and disuse cause them to atrophy and in time fibrous changes take place which further exaggerate the deformity. While these changes are occurring in the unparalyzed muscles, the opposite is the case in those paralyzed: the latter are gradually more and more overstretched, and as a result healthy muscle fibers that have escaped paralysis, and the ligaments, bones and joints undergo secondary changes.

The treatment is taken up under two heads:

1. *Preventive treatment*, in which the most important procedure is to identify the paralyzed muscles as early as possible and retain the limb in such a position that they will be fully relaxed; after this a course of massage, electricity, muscle beating and other means of stimulation may be instituted. Plaster of Paris splints are not recommended on account of their weight and the impossibility of applying massage. The part should be retained in a slightly over-corrected position; the splint or apparatus should be worn continuously until it is evident that no further improvement will take place or the muscles answer to the tests of recovery; as soon as paralyzed muscles show some strength, voluntary action should be encouraged.

2. The *corrective or surgical treatment* deals with deformities which result from unsuitable treatment and those following treatment correctly carried out but unavailing because of the extent of the permanent damage to the nerve cells. In the former the paralyzed muscles may regain a considerable amount of power after the deformity is corrected and suitably treated but in the second class no such return of power can be expected. Measures for the correction of the former include the following procedures: Straightening of the part with the hand or Thomas's wrench, division of tendons and other contracted structures, the removal of skin areas and the taking in of relaxed tissues, osteotomy and the removal of portions of bone. The latter require

such measures as muscle and tendon transplantation, arthrodesis and nerve anastomosis.

In cases of extensive paralysis which do not respond to mechanical or medical measures and are unsuitable for surgical treatment, some form of apparatus can usually be found of advantage.

The author takes up in detail the consideration of each individual deformity, describing the methods of prominent authorities. ROBERT B. COFIELD.

Melchior: Madelung's Deformity of the Wrist
(Die Madelungsche Deformität des Handgelenks).
Ergebn. d. Chir. u. Orthop., 1913, vi, 649.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Madelung's deformity is of rare occurrence; only about seventy-five cases have been published. Melchior and others (Duplay, Siegrist) consider it probable that rachitis plays an important rôle in the etiology, as other rachitic phenomena usually accompany the deformity, especially the spreading and irregularity of the radial epiphysis. The early ossification of the ulnar end of the epiphyseal line may be the cause of the deviation of the joint. There is no luxation of the carpus, therefore the author discards all descriptions which refer to the "spontaneous subluxation of the hand anteriorly." The non-presumptive name "Madelung's deformity" is better, as the nature of the disease is not clear. The term itself should be applied only to the symptom complex described by Madelung himself and not to other wrist joint anomalies, such as hyperostotic thickening of the capitulum ulnæ, which frequently is normal or induced by arthritic processes, such as the habitual subluxations of the ulna.

The subluxations of the ulnæ which accompany stiffening of the radiocarpal joint or traumatic curvatures of the radius should not be considered as being the deformity in question, as the nature of the deformity depends not upon the external configuration, but upon the position of the distal end of the radius, in which the displaced ulna plays only a secondary rôle. The course of the deformity can hardly be influenced therapeutically. Pains occur only during the period of formation. After one to one and one half years the disease remains stationary and produces only cosmetic defects, which, however, cannot be influenced by osteotomies. In conclusion the author refers to the reversed form of the deformity, the "typus inversus," in which the radius has a dorsal concave curvature. SIEVERS.

SURGERY OF THE NERVOUS SYSTEM

Nové-Josserand, Savy and Martini: Malignant Cubital Neuroma (Névrome malin du cubital). *Provincie méd.*, 1913, xxvi, 231. By Journal de Chirurgie.

The authors report the case of a boy 2½ years old who had a tumor mass in his left arm the size of an orange, which was first noticed six months before. On examination hard, rounded nodules were found

all along the course of the great vessels of the arm. There was no axillary or subclavicular lymphadenopathy or functional disturbance.

At operation the tumor was found to have originated in the cubital nerve and to have extended by small neoplastic growths along the course of the nerve up to the axilla. Two years later there was a

recurrence in the axilla which was removed, but returned after 4 years. The patient died following the removal of this. These diverse neoplasms of the nerves of the arm, more commonly of the cubital than of the cubital and median, make it possible in the course of each operation to state what sort of neuroma is present.

This case presented the usual clinical symptoms as it began in the deeper tissues, gradually involved the more superficial and did not give rise to disturbances of function or general health.

The first tumor was excised with some of the nerve, the cut ends of which were brought together by catgut. The nerve soon functionated as is so frequently the case following excision of nerve tumors.

Histologically this tumor was a sarcoma of the cubital nerve and the question was, did it develop from the nerve fibers or the nerve sheath? The authors believe this to be a true neuroma developing from the sheath of Schwann and not from the fibrous tissue sheath. The tumor cells were intermixed with the nerve fibers and the sheath was intact. The tumor did not invade the neighboring tissues.

J. DUMONT.

Hunt: Sciatica and Its Treatment. *Med. Rec.*, 1913, lxxiii, 1153. By Surg., Gynec. & Obst.

The causes of sciatica may be grouped under four headings: (1) Intra-pelvic disease; (2) constitutional state; (3) damage to the nerve trunk; (4) damage to the sacro-iliac joint. Occupation is a factor in the production of sciatica — in this respect exposure, over-exertion and pressure enter into consideration.

The symptoms of sciatica are pain, gait, wasting of the muscles, tenderness of the nerve to pressure, sometimes loss of the knee jerk. The course of sciatica is long, tedious and discouraging.

The treatment must depend upon the cause. If rheumatic, diabetic, or due to pressure, the remedies must be in proportion. If there is no discoverable cause, treat it as a primary neuritis. Rest, protection to the leg, and counter-irritation are the most valuable remedies, while cupping and leeches help, but the Paquelin cautery is preëminently the best of all local remedies. If the case is severe inject 100 cc. of normal saline solution into the sciatic nerve. The injection may be either below the knee in the peroneal branch or above in the main trunk. Baths of all kinds are of benefit. Hot air is questionable. Hypodermic injections of morphine and cocaine are dangerous. Massage may help. Stretching the nerve should be relegated to the list of remedies of last resort. As far as medication is concerned the list is large; castor oil, strychnia and methylene blue are valuable. The most important thing of all is to keep up the general health of the patient. To attain this end resort to nerve foods, tonics, and especially fat-producing foods. Avoid alcohol. Give attention to the after-treatment and do not discharge the patient too early.

De Luca: Action of the X-Rays on the Peripheral and Central Nervous System. *Arch. Rönt. Ray*, 1913, xviii, 9. By Surg., Gynec. & Obst.

To test the sensitiveness of central and peripheral nervous tissue to X-rays, experiments were made on white mice and guinea pigs. By protecting all except a small area over the brain, spinal cord, or sciatic nerve and by protecting these superficially with filters, massive doses were given without grave constitutional effects and with no local effects beyond epilation. In no case did the irradiation result in paralysis or even minor motor disturbances.

These researches help to prove that the nerve cell and fiber elements are at the lower end of the scale of radio-sensibility. This agrees with the previous findings that cells with higher and fixed functions such as are found in the retina, nerves, muscles, etc., are relatively immune to the action of X-rays. Such tissues are incapable of regeneration and are to be contrasted with tissues containing "young" cells such as are seen in the liver, bones, and genital glands, particularly in their growing or multiplying stages.

It has been argued from these facts that it is the nuclein content which determines the radio-sensibility of all cells and by this measure nervous tissue would be classified low in the list on account of its small proportion of chromatin elements.

HOLLIS E. POTTER.

Oehlecker: The Symptomatology and Surgery of the Disturbances of the Phrenic Nerve (Zur Klinik und Chirurgie des Nervus Phrenicus). *Zentralbl. f. Chir.*, 1913, xl, 852.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of a number of observations the author comes to the conclusion that in inflammatory conditions and in mechanical irritation of the endings of the phrenic nerve in the diaphragm a pain in the shoulder of the same side is felt. Mayo-Robson was the first to point out that pain in the back of the neck is a symptom in super-renal neoplasms transmitted by the phrenic nerve. Oehlecker observed such pains in a case of hæmorrhage in the right subphrenic space in a case of perforated gastric ulcer with an exudate in the left subphrenic space, etc.

The irritation upon the periphery of the phrenic nerve is transmitted by the central ganglion to neighboring sensory nerve roots, especially to the shoulder, as the principal part of the phrenic nerve rises from the fourth cervical root. Oehlecker attaches significance to the motor part of the phrenic nerve. Following the suggestion of Stuert, he divided the phrenic nerve in diseases of the lower part of the lung, in which, on account of pleural adhesions, a collapse of the lung cannot be obtained. He performed the phrenicostomy in three cases and gives details of the technique. He does not believe that the side reactions incident to the Kulenkampf plexus anæsthesia, as described by Sievers and others, are due to irritation or paresis of the phrenic nerve.

HIRSCHEL.

DISEASES AND SURGERY OF THE SKIN AND APPENDAGES

Davis: Excessive Thickening of Thiersch Grafts Caused by a Component of Scarlet Red (Amidoazotoluol). *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 178. By Surg., Gynec. & Obst.

In the first place, Davis states that he is fully convinced of the power of epithelial stimulation of certain of the organic coloring matters, namely, scarlet red, soudan III, azodolen, pellidol, etc., when applied locally to granulating wounds. During the past four years a number of enthusiastic articles have been published by well-known investigators on the satisfactory use of these substances. These papers almost uniformly report splendid clinical results in hastening the healing of sluggish granulating wounds of varying etiology, and in every situation.

The use of these coloring matters has also been objected to by some on the ground that there might be the possibility of producing epithelial overgrowths having malignant characteristics. Davis states that the consensus of opinion, deduced from experimental and clinical work, is that such danger is not great. However, he sounds a note of warning against the indiscriminate use of these substances by inexperienced persons, and he reports a case in which there was an overgrowth of epithelium following the use of amidoazotoluol in ulcers due to a burn in which Thiersch grafting had been employed. The patient has been under observation for over two years and a half since his discharge from the hospital, and there is no sign of malignant degeneration anywhere. The skin, however, shows a distinct overgrowth of epithelium of a pebbly formation.

GEORGE E. BEILBY.

Sutton: The Occurrence of Cancerous Changes in Benign New Growths of the Skin. *Am. J. M. Sc.*, 1913, cxlv, 819. By Surg., Gynec. & Obst.

The author supports the view of McDonough, who has made a study of the skin from the eyelids and the naso-facial grooves, and who thinks that all new growths of these regions are atavistic. The author reports two cases in support of his views.

The first case is that of a woman who for about thirty-five years had had warty growths varying in size from a millet-seed to an English walnut, which gradually increased in number, until in 1906 she had more than seventy, distributed asymmetrically over her face and chest. One was sectioned and found to be a typical acanthoma adenoides cysticum of Brooke. One year ago a small cystic tumor appeared at the inner canthus of the eye, which in the course of a few weeks broke down and extended peripherally. Despite treatment clinically it could not be distinguished from epithelioma. The second case is the daughter of the woman whose case is reported above. In 1905 she noticed some small flat-topped moles upon her forehead, which were pink in color, painless, irregularly distributed and slowly increasing in number. They remained stationary after attaining the size of a grain of wheat, except one located upon the right cheek which broke down in January, 1911, and was excised. It was found to be typical of rodent ulcer. Practically all of the other tumors have been removed by Pusey's carbon-dioxide snow.

Tumors so closely allied in histological structure and origin occurring in mother and daughter, point at least to a clinical relationship between acanthoma adenoides cysticum and rodent ulcer. H. A. POTTS.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESSSES, ETC.

Sykoff and Nenjukoff: Malignant Tumors from the Biological Standpoint (Die bösartigen Neubildungen vom biologischen Standpunkt aus). *Nowoje w Med.*, 1913, vii, 65.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Three general biological laws may be set down: 1. Carcinomata occur during old age and sarcomata during youth. 2. In some species the tendency for epithelial formation is greater, while in others connective tissue tumors prevail. 3. There are certain animals in which malignant tumors do not occur at all, as sheep, mules and geese. In explanation of the first two laws several biological facts are cited. The temperature of the animals plays a rôle; in mammals with low body temperature epithelial tumors develop more easily. In birds, however, which have a body temperature of 41-44° degrees connective tissue tumors are more prone to develop. On the

other hand, embryonal rests, variations in metabolism, and the lowering of oxidation processes also play an important rôle.

The present investigations have been conducted in regard to the oxidation ferments of tissues in general, and in malignant growths in particular. The ferments are classified into katalases, peroxidases and oxidases. The author then gives in detail his method and the results of his investigations.

He carried out a total of 100 experiments and came to the following conclusions: 1. Peroxidase is decreased in cancer cells and increased in sarcoma cells. 2. Katalase is decreased in cancer cells but not in sarcoma cells. 3. The degree of decrease and increase is apparently in relation to the maturity and malignancy of the new growth. 4. The nuclear substance of the cancer cell is changed. 5. Electrochemical investigations make it probable that we are dealing with alkali products in the cancer cell

and with acid products in the sarcoma cell. 6. The usual relation between nucleus and protoplasm is disturbed in the cell of malignant new growths. 7. The cells of carcinoma and sarcoma are differentiated by their chemical and biological characteristics not only from the cells of normal tissues but also from each other.

SCHAACK.

Nowell: An Etiological Factor in Carcinoma and Its Possible Influence on Treatment. *Boston M. & S. J.*, 1913, clxviii, 838. By Surg., Gynec. & Obst.

For more than a year the author has been investigating the etiology of carcinoma. While the results are not final, he reports the facts as they are at present. The experiments have been carried out with great care and each has been accurately controlled.

The author states that it is a well-known fact that carcinoma develops in the waning years of activity, at a time when there is a marked metabolic change going on synchronously with other retrogressions. With a diminution of the metabolic there is a similar decrease in the excretory functions. As long as the change in one parallels the other the equilibrium of earlier years is maintained, but if through some cause the excretory function suffers a more rapid impairment, an accumulation of waste products in the system must inevitably result. Such an accumulation operates unfavorably on the general organism and possibly might produce in a given group of cells a morbid activity, thus forming other and deleterious wastes. Further, should some extraneous cause operate to produce waste matter in excess of the impaired eliminative machinery, the result would be the same.

In this connection the author brings out the fact it is conceded by many that malignant growths are primarily of traumatic origin. Traumatism here is used in the broadest sense, to mean the filling up of a gland causing mechanical pressure, the formation of scar tissue; in short, anything that tends to produce irritation. Wherever there is an injury, nature rushes to the front; greater cellular production takes place, the extent depending on the health of the individual. If, however, the control of this production is abnormal, the increase may be so great as to cause pressure which, in turn, breaks down the surrounding tissue by affecting the blood and nerve supply. Under certain conditions these degenerative changes may result in a further production of deleterious chemicals. As it has been established that certain waste products have a decided action on the inhibitory centers, it is reasoned that in the above condition cellular production might be subject to a constantly decreasing control resulting in a constantly increasing velocity of growth. Thus directly through the impaired elimination of normal waste, or indirectly by the formulation through exogenous causes of abnormal waste, groups of cells might be excited to a pernicious activity. This, in turn, might be productive of other deleterious wastes through which the control of the nerve centers regulating

cell growths might be injuriously affected and the exercise of their function inhibited. Finally, such inhibitory effects would possibly show progressive characteristics, as the influence would propagate its own cause.

The author states that if this theory of the origin of carcinoma is correct, then the tumor, or the tissues undergoing these pernicious changes, should contain the toxic substances responsible for their continued growth and propagation. A failure to isolate such substances would not wholly prove their absence, as they might readily be compounds of such intense toxicity that the observed effects could be produced by quantities far less than could be detected by any chemical means. If, however, appreciable amounts of the toxine or toxins are present, they should be susceptible of isolation. It is along this line that the author has conducted his experiments.

Briefly, he uses the following procedure in isolating the toxic substance from the tumor tissue, after it has been proven malignant by clinical and histological findings. The freshly extirpated growth was carefully freed from fat and extraneous tissue, cut into small pieces and digested in water at 100° for many hours. The solution was filtered and the filtrate acidified and boiled. The soluble proteins were thus removed. The protein-free filtrate was exactly neutralized and evaporated to a syrup. This was carefully extracted with pure alcohol and the extract, after the removal of the alcohol by distillation, was repeatedly treated with ether. The residue was then dissolved in water, strongly acidified and again thoroughly extracted with ether. The extracts were then collected and the solvent removed by distillation. The residue was dissolved in water, rendered alkaline, boiled for half an hour and again filtered. On spontaneous evaporation, long white needle-shaped crystals separated. These were purified by repeatedly washing in water. The crystals in the purified form were the basis on which Nowell's conclusions were drawn. The exact nature of the crystals has not been determined. As they have been freed from all organic life any results which may be obtained by their use must be referable to the inherent chemical nature and not to the presence of organized life in any of its manifold forms. All the solutions used were carefully sterilized.

The author conducted many experiments with the rabbit and guinea pig. The results are fully described. He comes to the following conclusions:

1. A procedure has been developed whereby a substance or substances may be isolated from carcinomata, the method precluding the presence of organic life in the end product.
2. This end product has been shown to be of a highly toxic character.
3. The peritoneal exudate produced by a fatal intoxication is far more toxic than the original substance.
4. The tumor substance has been shown to possess not only a general but also a specific tox-

icity, since on injection into rabbits in doses of less than lethal amount it will produce well-defined, well-characterized carcinomata, the site of the primary lesion being different from and independent of that of the injection.

5. The appearance of the primary lesion is followed by the development of numerous metastatic foci in different parts of the body, while the characteristic cachexia manifests itself.

6. The poisonous tumor preparation has been shown to be characteristic of carcinomata.

7. By the repeated injection of very small doses a large number of rabbits have been immunized.

8. The serum from the animals thus immunized possesses the power of antagonizing the toxic action of the tumor substance. This has been demonstrated by injections of the serum either previous to or simultaneous with that of the tumor poison. In both events no effect is observed from quantities of the poison, which, if injected alone, would produce a rapidly fatal intoxication.

9. With the simultaneous injection of poison and antibody it has been shown that one part of the latter will effectually antagonize 99 parts of the former.

EDWARD L. CORNELL.

Syssojeff: Myeloma (Zur Lehre von Myelom). *Chir. Arch. Weljaminowa*, 1913, xxix, 348.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The article represents a microscopical study of myeloma. On the grounds of these careful investigations the author denies the occurrence of true metastases in cases of myeloma of the bone marrow. Myeloma is to be considered as a disease affecting the whole hæmatopoietic apparatus—a hyperplasia of the bone marrow cells. The so-called metastases described by former authors ought to be looked upon as pseudometastases. The latter are hyperplastic conditions of the lymphoid tissues, but these are to be found also in the internal organs under normal conditions.

HESSE.

BLOOD

Whipple and Hooper: Hæmatogenous and Obstructive Icterus; Experimental Studies by Means of the Eck Fistula. *J. Exp. Med.*, 1913, xvii, 593.

By Surg., Gynec. & Obst.

In studying the various types of icterus the authors made use of the Eck fistula. To simulate hæmatogenous jaundice, laked red cells were injected intravenously into control and Eck fistula dogs, and the urine examined at frequent intervals for the time of appearance, relative amounts and duration of excretion of the hæmogoblin and bile pigments. The reaction is in no way influenced by the Eck fistula although the blood supply to the liver is reduced to about 25 per cent of the normal. Practically the same results were obtained in normal and Eck fistula dogs when a hæmatogenous jaundice was produced by chloroform anæsthesia.

Simple obstruction to the common duct, combined with an Eck fistula gives rise to a definite low grade icterus with bile pigment constantly present in the urine. This observation does not harmonize with the view that bile pigments are formed solely from hæmoglobin, as there is no evidence of more hæmolysis in a normal than in an Eck fistula dog. This suggests to the authors that the bile pigment may be formed in part, at least, from other substances than hæmoglobin, and, further, that bile pigment formation may depend in part upon the functional activity of the liver cell rather than upon the amount of hæmoglobin supplied to it.

J. F. CHURCHILL.

Whipple and Hooper: A Rapid Change of Hæmoglobin to Bile Pigment in the Circulation Outside the Liver. *J. Exp. Med.*, 1913, xvii, 612.

By Surg., Gynec. & Obst.

The object of this communication is to submit evidence to show that hæmoglobin can be transformed into bile pigment when the liver has been excluded from participation in the reaction. To show this, the liver was excluded by means of an Eck fistula and ligation of both branches of the hepatic artery. The animal was then injected with laked corpuscles drawn from its own circulation. These animals died in four to six hours of hepatic insufficiency.

In another series of experiments, the liver, spleen, and intestines were excluded; and in a third series, the circulation was restricted to the head and thorax. The authors summarize the results as follows:

The intravenous injection of red cells obtained from the same animal and laked by distilled water is similar to certain types of hæmolysis which result in hæmatogenous jaundice. This procedure cannot be criticized on the grounds of introducing toxic substances. The hæmoglobin circulating in the blood stream is rapidly changed, in part at least, to bile pigment. The change goes on with practically the same rapidity in the normal circulation, in an Eck fistula animal, and in a dog with Eck fistula and hepatic artery ligation. Moreover, the bile pigment formation goes on in a dog whose liver, spleen, and intestines have been shut out of the circulation, and in those with a head and thorax circulation. In the last experiments there had been no operative manipulation of the liver and the bile pigment could not have escaped from the liver and have been absorbed by the circulation above the diaphragm; for example, by the thoracic duct. It is possible that the endothelium of the blood vessels is the agent which brings about the rapid change of hæmoglobin to bile pigment. This mechanism probably comes into play when there has been a destruction of many red cells with much hæmoglobin free in the plasma. The conclusion is reached that in dogs, at least, hæmoglobin can be rapidly changed into bile pigment in the circulating blood without the participation of the liver.

J. F. CHURCHILL.

Weber: Intravenous Injection of Small Quantities of Human Blood for the Treatment of Severe Anæmia (Über intravenöse Injektionen kleiner Mengen von Menschenblut bei der Behandlung schwerer Anämien). *München. med. Wchnschr.*, 1913, lx, 1307. By Zentralbl. f. d. allgem. Chir.

During the last four years forty-six intravenous injections were given to eighteen patients at the medical clinic at Giessen. In order to avoid untoward symptoms, the blood was kept for twenty-four hours in the ice-box. The dosage was 5 ccm. and was given repeatedly. Larger quantities cause stronger reactions, such as an increase of temperature, chills, quickening of pulse and breathing. Fifteen cases were treated with combined injections of serum and arsenic. The results were good. Three cases which were treated only with the injection of serum are reported in detail.

An extraordinary improvement of the general condition and the blood occurred in two cases of pernicious anæmia, while in a third case of severe anæmia only the general condition improved and the blood did not show any marked improvement.

WORTMANN.

Von Saar: Employment of the Momburg Tube in Cases of Hæmorrhage (Über Blutleere der unteren Körperhälfte). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author analyzed 400 cases in which the Momburg tube was employed and comes to the following conclusions: (1) The small intestine adapts itself very easily; the colon, however, is always compressed in its ascending and descending parts, hæmorrhages and contraction scars having been observed frequently at autopsy. In non-fatal cases mucous diarrhoea and hæmorrhage have been observed commonly due to mechanical injury to the walls of the bowel. (2) In the urinary system compression of the ureter is most important; the kidneys usually lying above the point of application of the tube. Transient retention of the urine occurs, but a permanent injury of the kidney does not result, although one fatal case due to anuria occurred following the application of the tube for $\frac{3}{4}$ of an hour. (3) The advantage of the tube lies in the compression of the aorta and vena cava anterior to the third lumbar vertebra. (4) Injury to the suprarenals was observed once in the human, but more frequently in animal, experiments. The fatal case due to anuria showed fresh areas of fat necrosis in the pancreas. Indirect injury to other organs may occur such as sudden death due to cardiac dilatation incident to sudden changes of blood pressure. In cases of broken compensation the danger is still greater. On account of the severe pain, anæsthesia is necessary. The indications for and against the procedure are given. The Momburg tube should not be employed in every case of hæmorrhage but only in selected cases and for vital indications. HORTZ.

Fonio: Arrest of Hæmorrhage and Treatment of Wounds with Coagulin Kocher-Fonio (Über die neue Blutstillungsmethode und Wundbehandlung durch das Koagulin Kocher-Fonio). *Cor.-Bl. f. Schweiz. Ärzte*, 1913, xliii, 385.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Many theories explaining the origin of blood coagulation are fully discussed. They all coincide in the following: Two or three elements combine with each other to form the active agent causing coagulation. As soon as this occurs coagulation begins in the presence of sodium salts. To prepare a reliable stypctic Fonio attempted to isolate one of these active substances from blood-plates. By fractional centrifugation he extracted a liquid from blood discs which were sterilized by boiling. This substance which accelerates and increases coagulability is termed coagulin Kocher-Fonio. The bleeding surface is sponged and the coagulin applied to it with a record syringe. On the basis of 77 operation reports, coagulin is credited with causing immediate hæmostasis, which is of special advantage in bloody operations, but also of possessing a secondary action which prevents secondary hæmorrhages.

In conclusion Fonio discusses the far-reaching possibilities of the remedy. He believes that in connection with the usual methods of treatment it may be of decided advantage in post-partum hæmorrhages due to uterine atony, in placenta prævia and in abortions by producing a rapid and lasting coagulation. Coagulin, which is manufactured by the Gesellschaft für chemische Industrie in Basel, has not yet been introduced in commerce, as it is being still further subjected to tests in the surgical clinic at Bern. BECKER.

Schreiber: The Checking of Internal Hæmorrhage by Means of Intravenous Injections of Grape Sugar (Über Stillung innerer Blutungen durch intravenöse Traubenzuckerinjektionen). *Therap. d. Gegenw.*, 1913, liv, 195.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Schreiber by means of intravenous infusions of about 200 cmm. of a 5-20 per cent solution of grape sugar was able to check gastric hæmorrhages as well as hæmorrhage in typhoid cases. He describes the method as being similar in effect to the action of Velde's intravenous injection of hypertonic salt solution and sees in the grape sugar injection a definite advantage on account of its nutritive value.

VON DEN VELDEN.

Froelich: Hæmorrhage from the Axillary Artery Three Months after Trauma; Ligation of the Artery; False Volkmann's Ischæmic Paralysis (Hémorragie foudroyante de l'axillaire trois mois après sa blessure; ligature de l'artère; fausse paralysie ischémique de Volkmann). *Rev. méd. de l'Est.*, 1913, xlv, 294. By Journal de Chirurgie.

The author reports the case of a boy 11 years old who was injured in the axilla by a fragment of wood in August, 1912. There was a severe hæmorrhage

which ceased spontaneously. Several days later a physician was consulted regarding an abscess which had developed in the axilla and opened spontaneously discharging a piece of wood. A fistula persisted and from time to time there were slight hæmorrhages preceded by severe attacks of pain. After entering the hospital the fistula was irrigated regularly and an X-ray picture was made which showed no changes about the shoulder.

November 12th, there was a more severe hæmorrhage than usual preceded by very severe pain, and on the 14th another copious hæmorrhage. The child was chloroformed, the axilla opened and a suppurating pocket found in which there was a piece of wood 3 by 1 cm. Blood was coming in spurts from the axillary artery but the hæmorrhage was stopped by pressure on the subclavian. On the 15th, the pressure was removed and the hæmorrhage did not recur until the 19th, when it was very severe. The axillary artery was ligated below the small pectoral muscle under the clavicle.

Serum was injected as the child was exsanguinated, the pulse gone and the arm cold. This coldness persisted for three days after which its temperature became normal. The arm was painful for ten days and paralysis of the flexor and tensor muscles followed. The flexors rapidly regained their function but the paralysis of the extensors remained.

This made it appear to be a Volkmann's ischæmic paralysis following ligation of the axillary artery. As a matter of fact there was only a radial paralysis and the contracture was due to lack of action in the antagonistic muscles. The fact that the thumb and fingers could be put passively in hyperextension proves it, as this is impossible in ischæmic paralysis. From the electrical examination it seems that the radial paralysis will be cured.

J. DUMONT.

Baum: Traumatic Venous Thrombosis in the Upper Extremity (Die traumatische Venenthrombose an der oberen Extremität). *Deutsche med. Wchnschr.*, 1913, xxxix, 997.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Traumatic venous thrombosis occurs more commonly in the arm, much rarer in the lower extremity. The general practitioner sees these cases oftener than the surgeon. The clinical picture is not generally known, and is frequently taken for muscle injury, muscle inflammation or neuritis. The condition occurs commonly after an indirect injury to the arm, even though a mechanical, chemical or infectious injury to the wall of the vein did not take place. The onset is more or less sudden with closure of one of the large veins. The trauma may be very slight, frequently not greater than ordinary muscular action.

There have been only seven cases of traumatic venous thrombosis of the upper arm published. After severe muscular action the signs of venous stasis appear. A compensatory circulation in time develops, due either to absorption of part of the thrombus or to the establishment of a collateral

circulation. The return of function of the arm depends more or less on the re-establishment of the circulation. Etiologically the condition is due to accumulation of blood platelets and thrombus formation as a result of injury to the vein and interference with the blood-stream. Even in the axillary vein it seems possible that thrombosis formations can occur as a result of severe muscular strain.

In regard to life the prognosis is favorable, especially if the thrombus is not disturbed. Embolism has never been observed. The prognosis in so far as restitutio ad integrum is concerned is decidedly bad, as the collateral circulation is usually insufficient. Venous stasis occurs, which is easily aggravated, and which interferes with the working capacity of the arm to a greater or less degree.

DE AHNA.

Major: The Wassermann Reaction in the Johns Hopkins Hospital. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 175.
By Surg., Gynec. & Obst.

The Wassermann reaction, as Major states, has been extensively employed in the Johns Hopkins Hospital in the past four years, and their experience with it confirms the result of a host of workers as to its reliability and specificity as a diagnostic procedure. The first report upon its use in that clinic was made in 1910 and the present report includes the cases from September, 1911, to August, 1912, in which the reaction was employed. In all, 1200 patients were examined, the great majority of whom were medical cases. This number includes a great variety of diseases ranging from outspoken cases of syphilis to neurasthenic patients, in whom the reaction was made for the purpose of excluding lues. The series includes also a great variety of functional and organic nervous and cardiac diseases, nephritis, diabetes, pneumonia, typhoid fever, gastro-intestinal diseases, and a fairly large number of cases of brain tumor.

Of these 1200 cases, 239, or 20 per cent, gave positive reactions, while 961, or 80 per cent, were negative. Of the cases giving positive reactions, 55, or 24 per cent (nearly $\frac{1}{4}$) gave no history of a primary sort. The percentage of negroes in the above figures is of some interest. The Wassermann reaction was performed upon 185 negro patients, the great majority being cardiac or cardio-renal cases, but including also other more uncommon diseases. Of this number, 61, or approximately 34 per cent, gave positive reactions, while 124, or 66 per cent, were negative. When this number is compared with the reactions on white patients, it is seen that 34 per cent of negroes compared with 17 per cent of whites, give a positive reaction. This indicates a frequency of positive reactions in negroes twice that of the whites. These figures do not perhaps give a sufficient indication of the greater frequency among negroes, since the total number of reactions performed on the sera of colored patients is considerably less than that on whites.

The Wassermann reaction in forty-two cases of aortic insufficiency showed twenty-one, or 50 per

cent, positive reactions. Of the twenty-one negative cases, all but six gave a history of rheumatic fever, four of the six showed marked arteriosclerosis, and one patient died of an acute aortic endocarditis.

The reaction was applied in twenty-two cases of aneurism, mostly of the aortic arch. Twenty-one, or 95 per cent, gave positive reactions. The patient who gave a negative reaction was a negro who had a definite history of syphilis seven years before. His serum was tested one month later after antiluetic treatment with the same result.

In 17 cases of tabes the Wassermann reaction showed eleven, or 64 per cent, positive. Three of these patients gave a negative serum reaction, while the cerebro-spinal fluid was positive; and three of the patients having positive serum reactions showed negative reactions in the cerebro-spinal fluid. Eight of the patients admitted luetic infection; nine gave no history.

Thirteen cases of general paresis were tested. Twelve, or 92 per cent, of this number were positive. The cerebro-spinal fluid was positive in every case examined (seven), while the blood was negative in seven cases. Nine of the 13 gave a luetic history.

The Wassermann reaction was done with the serum of 59 cases of various types of brain tumors, including gliomata, hypophyseal tumors and cysts, cerebellar tumors and cysts, and tumors of the spinal cord; all were negative results. In seven of these the test was negative also with the cerebro-spinal fluid.

The author summarizes his study as follows: "The past year's experience with the Wassermann reaction in this clinic confirms our faith in the reliability and specificity of this reaction. The only other diseases in which positive reactions have been reported (trypanosomiasis, yaws, scarlet fever, leprosy, and possibly malaria) are either so easily diagnosed or so uncommon here as to cause no confusion. Wassermann states that he and his assistants have performed over 10,000 examinations and never yet made a false diagnosis. While the number of patients in our series is much smaller, we feel that we have not made a false diagnosis the past year when the diagnosis of syphilis was placed after the names of 239 patients who showed a positive Wassermann reaction." GEORGE E. BEILBY.

BLOOD AND LYMPH VESSELS

O'Day: Arteriorrhaphy. *Northwest Med.*, 1913, v, 154.
By Surg., Gynec. & Obst.

There are two important principles to be observed in order to suture blood vessels successfully: first, perfect apposition of serosa to serosa, and second, that no trauma be inflicted upon that part of the vessel surface which is to come into contact with the blood stream. The methods of Payr, Carrel and Murphy do not neglect these principles, yet the author feels that since the occasion for vessel suture in the hands of the everyday surgeon comes only in emergency cases and since he may not be able to

successfully master the technique evolved by these men, he may follow a simpler procedure, as the author has done in one case, with success. In reuniting severed arteries, one very great difficulty is to overcome the retraction of the stumps.

The technique used with success by the author in his one case and subsequently bettered by animal experimentation is as follows:

Free the stumps and wash away all débris with normal salt solution. Apply rubber-covered Crile clamps to either stump and if filling and pulsation occur just back of proximal clamp, the operation may be begun. Never allow the field to become dry, but keep well moistened with normal salt. The suture material may be either chromicized 20-day catgut or preferably Pagenstecher linen, the size ranging from No. 00 to No. 1, depending upon the vessel.

Four even lengths of suture are cut and with the assistant holding one, one of the others is tied to it in the exact middle and the other two at distances representing one fourth the vessel circumference. The assistant now passes his suture to which the three are tied around the proximal stump at sufficient distance from its end to insure the turning back of a cuff adequate to good serous apposition, and makes it secure, lightly constricting the vessel wall.

The cuff is now turned back and fixed by fan-shaped sutures made with a needle on the free ends of each of the above placed sutures. The distal stump is then made to receive the cuff after the method of Payr, and a running stitch engaging a good bite is then carried around, sewing the distal stump well to the margin of the cuff. If the vessel be large, a circular tie may add an extra reinforcement; otherwise this completes the work.

The distal clamp is removed first and then the proximal clamp is gradually released. The sheath is sutured over the reunited vessel. The ligature will not cut into the intima unless too great constriction has been imposed. Exudate soon covers all the sutures.

FLOYD B. RILEY.

Swetchnikoff: The Action of Adrenalin upon the Peripheral Vessels (Über die Adrenalin-wirkung auf periphere Gefässe). *Dissertation*, St. Petersburg, 1913. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author studied the action of adrenalin upon peripheral vessels according to the newer method of measuring vasomotor influences devised by Krawkoff and Pissemski, and comes to the following conclusions: (1) gradual variations of blood pressure do not influence the action of adrenalin materially; with very weak adrenalin solutions and very high vascular pressure, dilatation is observed; with sudden increase of pressure a dilation of the vessels is observed regularly, which occurs also following an infusion of Locke's solution even upon addition of adrenalin, the action being all the more pronounced when the action of adrenalin is weakest. Rhythmic variations of vascular dilation are observed due to

variations of vascular tone. (2) The fresher a solution of adrenalin is the more pronounced will its action be; even minutes are important in this respect. In continuous infusion of adrenalin solution, a prolonged contraction of the vessels occurs first, which gradually recedes in favor of dilation; but if a fresh solution is again introduced, prompt contraction again occurs. (3) Room temperature and light weaken the adrenalin solution in Locke's solution. Long standing solutions may act as dilators to the vessels. Oxygen has no influence. At body temperature the vasoconstrictor action of such a solution is materially decreased. A temperature of 60–80 degrees C. for a half hour changes the action of the solution to a vasodilating action. (4) The slight decomposition which occurs in such solutions is due to the alkalinity of the Locke's solution. In neutral physiologic salt solution adrenalin is stable for a considerable time. Physiologic salt solution itself acts as a vasoconstrictor. (5) Blood serum and blood plasma also produce a gradual but prolonged vasoconstriction, the action of the serum being more marked than that of the plasma. Addition of serum to an adrenalin solution prevents decomposition of the solution. (6) Addition of small amounts of formaldehyde decreases the vasoconstrictor action of the adrenalin solution. (7) Lactic acid and chloroform when added to the adrenalin solution also decrease the effect of the latter appreciably. (8) Ergotoxin solutions produce a paralysis of the vasoconstrictors which is not affected by the addition of adrenalin. The action of adrenalin therefore seems to be exerted upon the sympathetic nerves. (9) By increasing the temperature of the adrenalin solution its action is gradually lost: at 36 to 39° C. its action is weakened, at 41–45° C. the vasodilating action of adrenalin becomes marked. This is not due to a decomposition of the adrenalin but to a special behavior of the vessels to adrenalin at higher temperatures. Several experiments were conducted with the preparation "Imido." It was shown that in weak solutions the vasoconstrictor action appears slower than with adrenalin but it is much more prolonged. Locke's solution, higher temperatures, even boiling for fifteen minutes and age of the solution do not weaken its action. Several tables and an extensive bibliography are appended. STROMBERG.

Jacob: Intradermal Lymphatic Varices in the Inguino-crural Region (Varices lymphatiques intradermiques de la région inguino-crurale) *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 606.

By Journal de Chirurgie.

The author presents a case of varices of the lymphatic capillaries of the skin. The main lymph channels and glands are not affected and so the condition must not be confounded with adenolymphocele. The actual lesion demonstrated is as a matter of fact a recurrence of a similar condition which was removed four years before by a radical operation removing both the skin affected and the inguinal lymph glands. Microscopical examination

shows that each is a dilated end of a lymph capillary. It was thought that as the patient had been to New Caledonia and the disease had started after his return to France it might be due to filaria but none could be demonstrated. There was no history of dermatitis, erysipelas, lymph-angitis or adenitis of the inguino-crural region.

Auvray reports a case in which a similar condition was present in the cutaneous lymphatics of the right arm of one suffering from a painful lymph angitis of the arm. In this case a persistent fistula formed from one of the varices and a large amount of lymph escaped. An apparent cure after four years of observation was produced by complete excision followed by X-ray treatments. J. DUMONT.

Syms: Lymphangioplasty: Handley's Method.

Ann. Surg., Phila., 1913, lvii, 785.

By Surg., Gynec. & Obst.

Syms' article consisted in a review of the literature relative to an operation called lymphangioplasty by Handley, with a report of its use in two cases of his own. Handley's operation was originally intended to relieve the brawny arm of breast cancer and similar condition of lymphatic oedema. The method consisted in producing new lymph channels by inserting silk threads subcutaneously. The tissues of the arm are drained by two long U-shaped lines of silk, each line composed of two threads of No. 12 tubular silk. These are inserted through a small incision on anterior surface of the wrist by means of a long probe with an eye at its end for threading silk. Probe is passed along the ulnar and radial sides of the arm emerging at the posterior border of the deltoid muscle. The same procedure is carried out on the posterior surface of the arm. From the opening at the posterior border of the deltoid the silk threads are passed to the scapular region of the opposite side, and others to the lumbar region of the same side. The small incisions are closed with horse hair sutures.

The author found twenty cases of brawny arm reported. Of these, nine were reported as successful, nine as failures, and in two results were not reported. The author's case was a failure so far as results were concerned. In seventeen cases where lymphangioplasty was tried for elephantiasis there were seventeen failures. In chronic oedema of leg, two cases were improved and one cured. In three cases of chronic oedema of face and eyelids, a cure was reported in all three. According to Syms, the use of this method of draining ascites was first described by Lambotte in 1905. It has been used alone or combined with the Thalma's or Ruotte's operations with variable success. The author's case of ascites due to cirrhosis of liver, in which he did an omentopexy plus lymphangioplasty; he secured a marked improvement for a time but patient died in collapse after fifteen days. It is the author's belief that the operation merits a more extensive trial, as some cases show undoubted results.

R. W. MCNEALY.

Bylim-Kolossowsky: Drainage by Means of a Thread According to Handley in a Case of Elephantiasis (Ein Fall von Fadendrainage nach Handley bei Elephantiasis). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh.*, St. Petersburg, 1913, xxii, 1. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports a case operated according to the Handley method. The patient before operation suffered from frequently recurring ulcerations and pains in the diseased leg. He was able to lift the limb only with the aid of his hands. Since the operation he has been entirely well. In ten months the circumference at the lower third of the leg has decreased ten cm. and the patient is able to lift it without difficulty. The mushroom-like growths have entirely disappeared.

VON SCHILLING.

POISONS

Davis: Interrelations in the Streptococcus Group. *J. Infect. Dis.*, 1913, xii, 386.

By Surg., Gynec. & Obst.

The hæmolytic growth on blood agar, capsule formation, solubility in bile, sugar reactions, pathogenic properties in animals and anaphylactic reactions are considered in discussing the relationship existing between various members of the streptococcus group. These various properties indicate that a gradual transition occurs from one member of the group to another, and it is difficult or impossible to clearly define the sub-groups. Experiments are cited pointing definitely to a transformation of one member into another. This phenomenon undoubtedly takes place within certain limits, and appears to be not uncommon.

SURGICAL THERAPEUTICS

Wolf: The Action of Collargol Enemata in Septic Processes (Über die Wirksamkeit von Kollargolklysmen bei septischen Prozessen). *Deutsche med. Wchnschr.*, 1913, xxxix, 944.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

As the intravenous injection of collargol is accompanied with considerable difficulty the author injected a 6 per cent solution (50 cc.) per rectum. The first patient for whom he used it was a soldier with a definite sepsis. Intravenous infusions of salt solution, 4 L. daily, three times with 1 gm. antipyrin added, did not affect the condition at all; neither did the subcutaneous injection of iodipin in 25 per cent solution. Later 25 cc. of a 2 per cent solution given intravenously according to Kausch also proved ineffectual and resulted in a thrombosis of the basilic vein. Thereupon 50 cc. of a 6 per cent solution of collargol was given per rectum every fifth day and the desired effect was obtained. Temperature dropped until complete recovery resulted. A total of eight such injections were given. These injections caused absolutely no mucous membrane irritation or other unpleasant symptoms.

WEICHERT.

Mokrzecki: The Treatment of Anthrax with Salvarsan (Zur Salvarsanbehandlung des Milzbrand). *München. med. Wchnschr.*, 1913, lx, 1089.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The patient had a severe malignant pustule on the neck with definite constitutional symptoms. The author cauterized the pustule and then administered .6 gm. salvarsan intravenously. The local and general symptoms receded rapidly, the temperature becoming normal within twenty-four hours. He attributes the result obtained to the salvarsan infusion.

HAGEMANN.

ELECTROLOGY

Snow: Dosage Measurements and Control of the X-Ray and Other Agents in Therapeutics. *Internat. J. Surg.*, 1913, xxvi, 199.

By Surg., Gynec. & Obst.

In considering dosage as applied to X-rays it must be admitted that none of the factors involved can be constant, the vacuum of the tube, the intensity of the rays or the resistance of the receiver, the patient. Many mechanical devices have been invented to test the penetrating powers of the rays but as a general rule the safest method to follow is to depend upon the results obtained to govern the subsequent dosage. As a rule, the current should be passed through a milliamperemeter on its way to the tube. A current of one milliampere may be allowed to flow through a tube at a distance of 12 to 14 inches from the surface to be irradiated for a period of ten minutes with safety. This treatment may be repeated on alternate days. Where the condition is a malignant one a longer exposure may be advisable. An accessory treatment can be secured from the use of the high-frequency current. This current has been shown experimentally to inhibit the action of the X-rays upon the skin and to prevent a dermatitis. The use of the two rays together is especially indicated in the treatment of many of the conditions due to the pyogenic organisms.

J. H. SKILES.

Dessauer: Physical and Technical Principles of Deeply Penetrating X-Ray Treatment (Physikalische und technische Grundlagen der Tiefenbestrahlung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author by a series of experiments demonstrated that the formation of the so-called hard or penetrating rays is dependent not only on the tube, but also upon the manner in which it is operated. The currents led into a tube will use up that tube equally, but the number of hard rays produced will vary under different conditions. It is of no advantage to increase the current through a tube beyond normal values; the important point is to operate the tube in such a manner that the largest number of hard rays result. This can be accomplished in the following manner: (1) By using a not too high

frequency (twenty to twenty-five cycles per second), as then the ionization of the tube does not occur between the last two cycles. (2) The proportion of penetrating rays is increased if the current density in the tube during each cycle is comparatively large. It is recommended, therefore, to start with a sufficiently high primary voltage to make the current density correspondingly high. (3) He has determined by means of spectrum analysis that the greater number of hard rays are produced at or near the anode and the so-called softer or less penetrating rays near the cathode. He therefore constructed an apparatus for deep penetrating rays, taking advantage of these three points, and in particular utilizing only the rays at the beginning of each illumination.

Bucky: A Grating-Diaphragm to Cut off Secondary Rays from the Object. *Arch. Rönt. Ray*, 1913, xviii, 6. By Surg., Gynec. & Obst.

To eliminate the so-called object secondary rays, which are really secondaries arising within the tissue and projecting in all directions to blur the object shadows cast by the primary cone of rays, a metallic grating is placed between the object and the plate.

This grating is composed of numerous strips of metal two to four centimeters wide arranged cross-wise on edge. The grating alone has the drawback of casting a gridiron-like shadow on the plate. When used in skiagraphy of an anatomic part each mesh of the grating acts as a square diaphragm absorbing all except the direct rays from the anode. In this way practically all "diffusion effects" are eliminated. Other things being equal, the length of exposure must be increased about 25 per cent when using the grating.

HOLLIS E. POTTER.

Werner: The Radio-Therapy of Tumors (Die Radiotherapie der Geschwülste). *Strahlentherapie*, Berl., 1913, ii, 614. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Werner reports his experiences with 3,500 patients with tumors whom he treated during six years and a half. After a detailed consideration of the results and the limitations of the X-ray therapy, he discusses the combined method of treatment with radium, mesothorium and thorium, the results of which are rather good and are expected to be successful in the future.

The combined radio-therapy consists of: 1. A diffuse, relatively homogeneous, concentric X-ray radiation, which should embrace the entire focus of the disease and the neighboring organs. 2. A local external and internal radiation with radio-active substances by application of radiating bodies and pastes as well as the injections of radio-active emulsions and solutions with cholin salt solutions. 3. Intravenous injections of radio-active solutions, especially of thorium-X, and of intravenous and intraglutal injections of cholin salt solutions. THIEMANN.

MILITARY AND NAVAL SURGERY

Lotsch: Gunshot Injuries of Blood Vessels (Schussverletzungen der Blutgefäße). *Deutscher chir. Kong.*, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author speaks of his personal experiences obtained in the Balkan war, and comes to the following conclusions: The modern pointed bullet frequently causes blood-vessel injuries. Excepting the severe fatal hæmorrhages from large vessels, there are relatively few primary hæmorrhages that need immediate operative interference, because the entrance and exit wounds of the modern bullet are very small. All types of blood vessel injury are seen, from erosions to clean perforations and complete severing of vessels. The artery and vein are very frequently injured together. Usually a quiet hæmatoma develops, which in a few days begins to pulsate, and becomes a spurious aneurism. All injuries in the neighborhood of large vessels without large hæmatomas may develop mural thrombi in the vessels and should be treated to prevent embolism. Cases with quiet hæmatomas, if well mobilized, may be transported to the field hospital under good transportation. The dangerous hæmorrhages can be observed at the little wound plugs. Only in threatening rupture, in danger of pressure, gangrene, and suppuration, should primary ligation be done. With proper fixation and, if necessary, compression, most gunshot injuries of blood-vessels will heal without operation. Under the primitive conditions of troops and field hospitals, ligation of vessels is difficult and time consuming. Unnecessary ligations are to be avoided and should be left to retrogressive healing. Hæmorrhage in all cases demands immediate interference in narcosis and with a compression anæmia. Double ligation proximal and distal to the injury should be practiced. Under unfavorable conditions this is difficult for the trained man, impossible for the inexperienced.

The technique of blood vessel ligation is of considerable practical importance for emergency surgery on the battlefield. The ligation of blood vessels ought to be practiced more than ever in courses of operative surgery. In late hæmorrhages after four to nine days, the collateral circulation may be relied upon, at least in the extremities. Aneurisms are first treated by compression. The above-mentioned conditions may, however, demand operation at any time. Aneurism operations should be attempted only in permanent hospitals, where extirpation after double ligation may be performed under ideal conditions. Suture of blood vessels is only possible in a very small number of cases, and then it should be done under the best possible conditions. Primary suture of vessels should not be attempted in field hospitals.

GYNECOLOGY

UTERUS

Romeo: A Large Coprolith Enclosing the Uterus and Simulating a Malignant Tumor (D'un voluminoso calcolo fecale inglobante l'utero e simulante neoplasia). *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 536.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient was a woman 32 years of age, suffering from a dyspepsia for the past three years, increasing anæmia, loss of weight (20 kg.). Lately she had burning and pressure over the colon with tenesmus and frequent but small bowel movements consisting of bloody fluid. Numerous diagnoses were made: endometritis, ovarian cyst, inoperable carcinoma of the rectum, etc. The patient was almost cachectic; the small pelvis was filled with a hard tumor nearly the size of a child's head. Uterus was palpable only anteriorly; at its sides and posteriorly it was continued into the tumor. The mass could be palpated from below through the rectum with pressure exerted from above. It was with difficulty removed. The mass weighed 550 grs. and consisted of foul-smelling extremely hard faeces. The rectum was tamponed on account of hæmorrhage. The next day the uterus was easily palpated, and suppuration of the posterior wall of the vagina occurred. The patient gained in weight rapidly, and a complete recovery ensued.

The author emphasizes the importance of examining the rectum in all cases of pelvic disease. He also recommends the prophylaxis of chronic obstipation, a frequent accompaniment, and occasionally the etiologic factor, of pelvic disease. COLOMBINO.

Wilson: Chorio-Epithelioma Following Hydatidiform Mole and Giving Rise to Intra-peritoneal Hæmorrhage from an Extension in the Right Meso-salpinx. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 224.

By Surg., Gynec. & Obst.

Wilson's case is that of a woman 30 years old, married 3 years and the mother of one child 21 months old. She suffered from mammary abscesses and cystitis for three months following her delivery. The menstrual periods had been regular until 3 months before examination, when she became pregnant and went on normally for 2 months. At that time she was seized with bleeding which has continued up to the time of the examination. She has had some vomiting and cramplike abdominal pains. The uterus on examination was large and fairly firm. On curettage a hydatid mole the size of the closed fist was found. The patient recovered nicely. At the end of four weeks she complained of an irritable bladder, some pain and heaviness in the pelvis along with a little blood-stained daily vaginal

discharge. Four weeks later on abdominal section free red blood was found in the peritoneal cavity, with a large, dark clot behind the uterus. The uterus and both appendages were removed and the patient was discharged convalescent three weeks later.

In the right fundus of the uterus there was a rounded projection, encapsulated, dark red in color, friable and presenting the typical appearance of chorio-epithelioma. This growth projected as a small, polypoid, sessile mass into the cavum uteri; elsewhere the endometrium was normal in appearance. The tubes and ovaries were healthy, but on the posterior surface of the left meso-salpinx a small eroded nodule was discovered from which the free blood in the peritoneal cavity was coming. This also was of the same character as the fundal tumor, and as no evidence of a continuity of growth could be demonstrated it was doubtless of embolic origin.

C. D. HOLMES.

Raspini: Adenomyositis of the Uterus and of the Rectum (Sull'adenomyositis dell'utero e del retto). *Ginecologia*, 1913, ix, 577.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After a general résumé of the present status of adenomyositis the following clinical history is detailed: A female patient, 36 years old, had had one abortion, followed by severe pains in the lower abdomen, but was otherwise generally healthy. Between the uterus and rectum an immovable tumor was palpated, but the adnexa and rectum were normal. This led to the diagnosis of malignant tumor in the recto-vaginal space. The uterus was extirpated with the tumor. Analysis showed that there were numerous hollow spaces lined by cylindrical epithelium. As far as the etiology is concerned, the author assumes that the whole process was probably the result of an inflammatory activity and irritation. The possibility of its origin from Müller's ducts cannot be denied. The author believes that cases are not infrequent, which, if microscopical examinations of inflammatory processes of the pelvic peritoneum were made, would reveal more frequently the picture of adenomyositis. The most certain treatment is operative removal.

FLATAU.

Daels: Contribution to the Study of Benign Chorio-Epitheliomas of the Wall of the Uterus and Tubes (Contribution à l'étude de chorio-épithélioma bénigne dans la paroi de l'utérus et des trompes). *Bull. de l'Acad. roy. de méd. de Belg.*, 1913, xxvii, 175.

By Journal de Chirurgie.

The author states that Schikele of Strasbourg, has shown that there is a hyalin degeneration in the

vessel walls of the uterus during pregnancy. This sign of pregnancy which appears first during the first month is of great importance as it disappears last following abortions. Daels and Doussy state that there exist in the uterine vessel walls syncytial cells rich in chromatin, more or less regularly arranged which differ from the decidual cells.

In two cases of tubal pregnancy which had been resorbed several months previously, the author found such elements in the wall of the tube. This contradicts Meyer's statement that normal exochorial involution occurs two weeks after the expulsion of the foetus. The clinical importance of these cells is that they serve to differentiate between the endometritis following abortions and other forms. In the treatment of that following abortions in which syncytial cells were found by curettage, 83.3 per cent were successful, 12.5 per cent better and 4 per cent unsuccessful. In the other endometritis cases treated by curettage there were 31.2 per cent successful, 43.7 per cent improved and 24.9 per cent unsuccessful. The author thinks that all the simple endometritis cases following interruption of pregnancy are curable by curettage.

These syncytial cells do not seem to have any connection with the nourishment of the foetus nor with utilization of maternal waste products. It seems that these aberrant cells have lost their normal function and are in fact benign neoplasms which the organism is able to combat successfully. Daels believes that a microscopical examination of the walls of the tube or uterus would serve to substantiate a diagnosis of pregnancy by Abderhalden's serum test.

J. DUMONT.

Bumm: Results of X-Ray and Mesothorium Treatment of Uterine Carcinoma (Über die Erfolge der Röntgen- und Mesothoriumbehandlung beim Uteruscarcinom). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

Skin epithelioma have long been cured by radium. The use of hard filtered rays and large quantities of radio-active substances makes the deep seated and more rapidly growing tumors subject to treatment, 10,000 x Kienbock and 15,000 milligram hours and even more have been given. He reports 12 cases:

1. Squamous cell carcinoma of the portio; 1,927 x. Cure.

2. Cervix cancer, a foul infiltrating tumor; 8,200 x and 12,000 milligram hours mesothorium. Only scar tissue left; the curette brought nothing away.

3. Carcinoma of the vagina with involvement of the rectum 3,500 x and 8,700 milligram hours mesothorium; scar tissue where carcinoma was; no secretion or hæmorrhage.

4. Carcinoma of vagina; 3,400 x and 14,200 mg. hours; clinically cured.

5. Carcinoma of the cervix; 10,000 x and 15,120 mg. hours. Callous scar with no secretion.

6. Carcinoma of the cervix; 1,900 x and 10,400 mg. hours; curette showed nothing..

7. Stinking carcinoma colli; 9,350 mg. hours; ectropion covered with epithelium; operated upon.

8. Large crater-like carcinoma colli; in 24 days 13,320 mg. hours; crater closed; operated.

9. Large squamous-cell carcinoma involving urethra and neck of bladder; 1,900 x; complete cure.

10. Adenocarcinoma of the urethra; 800 x and 4,600 mg. hours; reduced to a small ulcer in the urethra; still under treatment.

11. Recurrence after total extirpation; large ulcer with infiltration; exposure aided by incision; 3,500 x and 14,200 mg. hours; complete overgrowth of skin; formation of a scar cavity.

12. Recurrence after total extirpation and secondary recurrence operation; large foul tumor filling the vagina; 1,218 x and 15,350 mg. hours. Scar tissue, curette shows no cancer.

All parts of the cancer that can be reached are destroyed and the part is clean in a few weeks, with or without extensive scar tissue. Cases 7 and 8 showed cancer still present, but they had been treated only 9 and 21 days respectively. To avoid ulceration, very hard rays must be used. Bumm used lead filters. He found two cases which were cured of their cancer but died of necrosis and urinary infections.

JAMES R. MILLER.

Döderlein: Röntgen-Ray and Mesothorium Treatment of Myoma and Carcinoma of the Uterus (Röntgen-Mesothoriumbehandlung bei Myom und Carcinom des Uterus). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May. By Surg., Gynec. & Obst.

The author ascribes to Krönig and his school the credit for the great advance in the radiotherapy of cancer as well as of myoma. Döderlein has been working along similar lines and reports exceedingly good results from the use of mesothorium in cancer. The cancer of old people is easiest to influence. One operable case in a very early stage was treated with complete cure; a heart lesion made operation very unsafe. Döderlein presents beautiful microscopical preparations, which prove that his optimism has a firm foundation. The cancer cells are shown to disintegrate at different stages in the treatment, whereas the normal cervical mucosa remains in apparently perfect condition. A selective action of the highly filtered rays for the cancer cells is therefore proven.

J. R. MILLER.

Küstner: A Peculiarly Shaped Myomatous Uterus (Ein myomatöser Uterus eigentümlicher Konfiguration). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The uterus had acquired the size of an adult's head, the whole corpus being evenly transformed into a myomatous mass of tissue. The only portion still normal was the outermost layer directly below the peritoneum. This was about $\frac{1}{2}$ cm. thick and the mass consisted of a great number of myomatous nodules. This is the first case of this sort observed by Küstner, in spite of the fact that he has seen

many hundreds of myomata. The little mucosa that was present showed a normal structure. The appendages also were normal except for the peculiar smoothness on the surface of the ovary, there being no Graffian follicles and very few corpora albicantia. The hymen was absent and a penis-like protuberance projected from the external genitalia. The urethral opening was invisible and there was no vaginal pouch in the rear of this. The patient was thirty-seven years old, had never menstruated and came into the clinic on account of hæmorrhage from the genitals, the result of trauma.

SAUER.

Freund: Partial Myoma Operations (Über partielle Myomoperationen). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In women approaching the menopause it is frequently possible to retain menstruation by performing a partial operation, which however will be radical in effect. This is an advantage over X-ray therapy. The author reports a new wedge-shaped myomectomy including the entire fundus and corpus uteri. The bladder is stripped off the uterus; the curved incision extends from the middle of the posterior uterine wall, passes the tubal insertion to the middle of the anterior wall, a corresponding incision on the opposite side is made and a wedge-shaped portion is excised, including all hypertrophied mucous membrane. The defect is sutured in two layers. No myomatous nodules are overlooked by this method and large portions of hypertrophied muscle and mucosa can be removed.

In pure fundus tumors the author excises the entire fundus by means of a circular incision. Menstruation was retained in all cases and became normal. In smaller tumors both operations can be performed vaginally.

Whitehouse: Pathology and Treatment of Uterine Hæmorrhage. *Practitioner*, Lond., 1913, xc, 952.

By Surg., Gynec. & Obst.

Hæmorrhage due to pregnancy and abortion or to neoplasms is not here considered, the author confining his views to conditions where the diagnosis may be less typically set forth. His conclusions are:

1. No treatment of uterine hæmorrhage can be rational unless the cause is established; the empirical administration of hæmostatic drugs is frequently useless and indiscriminate curetting is dangerous.

2. The menorrhagia that occurs in young girls at the age of puberty is probably due to the association of functionally mature ovaries with a deficient uterine musculature. It tends to spontaneous cure and should be treated by rest and, if possible, removal to a higher altitude.

3. Hæmorrhage in young women may be due to mucous polypus, adenomatosis uteri, or bacterial infections of the uterus.

4. A practical method of investigating the bacteriology of the uterus is by the collection of the menstrual blood.

5. Hæmorrhages at the menopause are frequently the result of increased arterial tension, portal obstruction or degeneration and fibrosis of the uterus secondary to arteriosclerosis. It is probable that some cases of fibrosis uteri are syphilitic in origin. Treatment must be to reduce vascular tension. Ergot usually fails and it may be necessary to remove the uterus.

6. Faults in the calcium metabolism may be the cause of obscure uterine bleeding, which may be cured by discovery of the cause and the administration of calcium salts. Occasionally, the combination of thyroid tissue with calcium is beneficial.

7. In every case of uterine hæmorrhage, it is essential to look for a general cause before the local pelvic condition is investigated.

CAREY CULBERTSON.

Sehrt: The Thyreogenous Etiology of Hæmorrhagic Metropathies (Zur thyreogenen Ätiologie der hæmorrhagischen Metropathien). *München. med. Wchnschr.*, 1913, lx, 961.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Sehrt investigated twenty cases of uncomplicated metropathies, finding a high grade lymphocytosis (50%) and a relative neutrophile leucopenia (45-68%) in thirteen. One case, which had no lymphocytosis, presented 10.2% eosinophiles. Coagulation of the blood was increased in 19 cases (8-4 minutes against 9-10 minutes normally). From the analogous blood picture in hyperthyroidism he concludes that the disturbance of the relation between the thyroid and ovary may be the basis for these unexplainable hæmorrhages and that many cases of hæmorrhagic metropathy are really abortive cases of myxœdema. On account of the parallelism of the symptoms of tetany of pregnancy and eclampsia and because of the absence of a definite anatomical basis by which these two conditions can be differentiated clearly, the author advises noting the blood picture of eclampsia. The histological findings of Hofmeister, who observed kidney changes after thyroidectomy, the combination of myxœdema and eclampsia (Herrgott, Fruhinsholz, Jeandelize), the increased coagulability of the blood in eclampsia (Jarzew) lead to the suspicion that a relation exists between hypo-thyroidism and eclampsia. This view is supported by an observation of the author's. The patient was a woman who had had a difficult labor with severe hæmorrhages three years previously, and who presented the blood picture of hypo-thyroidism. The labor occurred spontaneously, but a four-day eclampsia developed.

KÖHLER.

Bell: The Pathology of Uterine Casts Passed During Menstruation. *Surg., Gynec. & Obst.*, 1913, xvi, 651.

By Surg., Gynec. & Obst.

This paper is based on some original pathological investigations of uterine casts passed during menstruation. The author states that there are two distinct kinds of uterine casts: (1) True blood casts

of the uterus, (2) endometrial casts. He considers that the blood casts are formed by the clotting of menstrual blood within the uterine cavity. He points out that he has already shown that menstrual blood does not clot normally owing to the extraction of the fibrin ferment by the endometrium, but that when there is menorrhagia the flow is too rapid for this retraction to be effected and consequently the blood may clot either in the uterus when blood casts are formed, or in the vagina. The endometrial casts may be either thick or thin according to the depth of the denudation of endometrium which is brought about by the hæmorrhage which strips up either the whole or the superficial layers of the endometrium. The latter in these circumstances, is denser than normal owing to the decidua-like change in the cells of the stroma.

Illustrations are given of many menstrual endometrial casts to show the macroscopical and microscopical appearances. One case is of peculiar interest, for the author removed the fallopian tubes three years previously. Almost every month this patient passes a thick endometrial cast, which resembles in macroscopical appearance an early abortion. Microscopically the cells of the stroma show a marked decidua-like reaction.

Chisholm: Menstrual Molimina; Adult Cases.
J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 389.

By Surg., Gynec. & Obst.

Basing her conclusions on a study of 100 cases, and upon the previous work by Tobler and Ketsham, the author has formulated the following:

1. Among adults the causes of disturbance at the menstrual period are many more than among adolescents.

2. Passive hyperæmia of the pelvic organs appears to be the cause of much local pain. This is relieved in the majority of cases in the first day after onset of menstruation.

3. Unhealthy hygienic conditions and mode of living contribute to lowering the general nervous system so that pain is readily felt and a habit of pain at the menstrual period formed.

4. Nervous symptoms, reflex and vasomotor, are often associated with secondary menstrual discomfort.

5. Except in a very small minority of cases this menstrual discomfort does not affect the woman's capacity for carrying on her ordinary work.

6. Any appearance or development of menstrual pain shows a pathological condition whose cause, whether local or general, ought to be investigated and treated before the discomfort becomes established as a regular habit. CAREY CULBERTSON.

Haymann: Disturbed Menstruation in Psychosis (Menstruationsstörungen bei Psychosen). *Ztschr. f. d. ges. Neurol. u. Psychiatr.*, 1913, xv, 511.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author made a careful study of cessatio mensium in the psychic cases. The patients

ranged from 18 to 46 years and included only those who failed to reveal a cause for the menstrual disturbance. All cases had been observed at least 3 months. The author's observations were made on 206 such patients and his conclusions are:

1. Cessatio mensium is frequently met with.

2. It may begin in any stage of the mental disturbance. It precedes the psychic symptoms in a small percentage of cases but occurs most frequently one to two months after the mental symptoms become manifest.

3. Menstrual disturbance seems to be absent in cases of chronic paranoia, is rare in imbeciles, in cases of hysterical psychoses, and degenerative idiocy. It is present in 50 per cent of epileptics and 33 per cent of the cases of mania and melancholia. It is most manifest in cases of dementia præcox and catatony, somewhat less in hebephrenia and least of all in dementia paranoides. It is very frequently present in organic psychoses, including paralysis.

5. There is a decrease in weight at the time of menstrual disturbance, the weight again going up when the menses return. KÖHLER.

Blau: Dysmenorrhœa and Its Treatment (Wesen und Behandlung der Dysmenorrhœe). *Med. Klin.*, 1913, ix, 653.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The majority of authors are agreed that the cause of the pains lies in the condition of the nervous system. In most cases the weakness of the nervous system is associated with a hypoplasia of the genitals and, like the latter, must be considered as a part of a constitutional anomaly of asthenic infantilism. It is therefore necessary to test the general condition of the patient and especially the nervous system and look for symptoms of asthenic infantilism.

In addition to the general treatment psychotherapy alone is the etiologically correct one. Regulation of the bowels is of extreme importance. Sexual intercourse is advised when no unfavorable influence upon the nervous system is feared. Locally hydrotherapy, gymnastics and massage are recommended in sexual infantilism. If the general and local treatment fail, sounding and dilatation of the uterus may be employed. Castration is of questionable value. X-ray treatment is dangerous because of the possibility of inducing permanent sterility or, later, feeble conception products. Pain incident to menstruation should be controlled by hot applications and the usual drugs. Nasal therapy on account of its good results deserves to be tried in each case. BISCHOFF.

Zoeppritz: The Treatment of Amenorrhœa (Zur Behandlung der Amenorrhœe). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In women suffering from amenorrhœa an increase in the lipid content of the blood has been observed indicating a hypo-function of the ovaries (Neumann-

Herrmann). The author investigated this fact and determined that in 25 cases of amenorrhœa a decreased amount of lipoid was found, while in another 100 cases the amount was increased. In the latter a marked improvement was obtained by the administration of ovarian extracts, while the former class did not react to ovarian preparations nor to pituitrin as recommended by Fromme.

Hill: A Further Consideration of the Use of Corpora Lutea in the Treatment of Artificial Menopause. *Surg., Gynec. & Obst.*, 1913, xvi, 712.
By Surg., Gynec. & Obst.

Hill, in reporting twelve cases treated with corpora lutea, was careful to select patients of intelligence and reliability, running from 25 to 38 years of age, cases upon whom he had operated and removed both ovaries and who showed the most severe type of nervous symptoms. Following the use of corpora lutea in these cases the nervous manifestations were completely relieved in every case. In two only was there complete relief from flashes of heat. In one case where insomnia was a most disturbing symptom, complete relief was obtained from corpora lutea, five grain capsules being used three times daily (total number, 50). The author was unable to report any cures, as in several instances the treatment was interrupted and in others who had ceased treatment, relapses occurred and they were compelled to resume treatment.

Hill in a later article calls attention to cases of artificial menopause reported to in which partial or complete failure to control symptoms were noted following the administration of corpora lutea. In seeking to determine why these reports were so much at variance with his own results, it developed that insufficient medication was the prime factor in the failure to control symptoms. In some cases as few as twenty-four capsules were given; in others the maximum was one hundred. Hill calls attention to the abrupt precipitation of symptoms and the great amount of disturbance, etc., and the obvious necessity for a treatment of some duration. The disturbing symptoms usually appear within a short time after operation, in many cases showing at the time the next period should manifest itself and continuing, unless relief is obtained, for from eighteen months to three years.

Symptoms may disappear after using corpora lutea and reappear after its administration has been discontinued. Treatment should be continued for some weeks after the patient presents a normal condition. The author finds it necessary in most of his cases to give at least one hundred capsules and in others two hundred before suspending treatment. In relapsing cases the second treatment is usually much shorter than the first.

Ward: The Treatment of Endometritis. *N. Y. M. J.*, 1913, xcvi, 1181. By Surg., Gynec. & Obst.

The pathology and treatment of endometritis are discussed in this paper. Ward refers to the revolu-

tionizing work of Hitschmann and Adler, published in 1908, on the cycle of the four distinct stages of the endometrium throughout the menstrual month. The first stage is the premenstrual, which begins six to seven days prior to the appearance of the flow and is characterized by an increase in the thickness of the mucosa two to three times that of the resting stage. The glands and their cells are enlarged and the stroma throughout has assumed a decidual type. This stage presents the conditions which were previously considered as characteristic of chronic hypertrophic endometritis. The second stage in the cycle is the menstrual stage, when the blood appears and a general deturgescence is noted. The glands become flattened and some of the superficial epithelium is cast off. The third or post-menstrual stage shows the mucosa thin and pale. The glands are narrow, straight, with contracted lumina, and the epithelial cells are small. The fourth stage is the interval stage which lasts about two weeks and shows the mucosa in what we have hitherto considered the normal condition. The normal changes, therefore, must be recognized as a temporary physiological hyperplasia and they become pathological when they are permanent or stationary. The permanent hyperplasia may be due to true inflammation or to circulatory disturbances.

Albrecht and Logothetopoulos contribute the following conclusions for an anatomic diagnosis of endometritis: 1. It is based on certain changes in the stroma and blood vessels, circumscribed or diffuse infiltration of leucocytes, exudation, hypertrophy or atrophy of the stroma, the presence of blood pigments, proliferating blood vessels and infiltration along the vessels, and inflammatory infiltration in the muscular interstices. 2. In addition to the normal premenstrual hyperplasia there are certain pathological forms which are stationary; as the transitional forms between hyperplasia and adenoma occurring during the menopause, post-menstrual and interval hyperplasia; hyperplasia following prolonged placental retention; and hyperplasia after prolonged hæmorrhages. 3. The permanent hyperplasia may be distinguished from the temporary form by certain anatomical features: mitosis, which is not marked in the latter form; irregularity, as absence of the premenstrual folding of the mucosa; true intraglandular papillary proliferation; twisting and elongation of the glands; thickening and increasing of the epithelium due to mitosis; irregular secretion and loss of the typical premenstrual secretion. 4. In chronic inflammation the regularity of the cyclical menstrual phase is disturbed. 5. Chronic inflammation usually causes a proliferation of the uterine glands; hyperplastic and proliferating endometritis is therefore a correct term, but it should be distinguished from the pathologic hyperplasia of the uterine mucosa in the absence of inflammation.

The treatment of endometritis is presented from the clinical rather than pathological standpoint. All cases of endometritis are divided into two

varieties: one, those which are the result of an infection; and two, those resulting from circulatory disturbances. In the first variety, acute and chronic types are seen, but the chronic form, on account of the loss of virulence of the causative bacteria, or their disappearance, simulates closely the non-infective type. The treatment is summarized as follows:

1. Leucorrhœa, the most prominent manifestation of the disease, comes from the uterine cavity and not from the vagina.
2. The treatment to be observed in acute infective cases is masterly inactivity.
3. The first and most important principle to be observed in treating cases of chronic hyperplastic endometritis is to determine the cause of the venous stasis and treat the same by appropriate measures.
4. The curette is the most valuable means for removing the greatly thickened and diseased endometrium, but if it is used alone, without correcting the cause, only temporary relief is obtained.
5. Vaginal douches, glycerine packs, and postural methods, if employed properly, are valuable adjuncts in aiding and improving the pelvic circulation.
6. In those cases which are probably dependent upon disturbed ovarian function, either excessive or diminished, such as in the preclimacteric menorrhagias and metrorrhagias, arteriosclerotic uteri, chronic metritis, fibrosis, etc., and which are not benefited by the curette or local measures, a cure is sought in the direction of ovarian control, possibly by the X-ray or by sera from antagonistic glands of internal secretion; otherwise complete ablation of the ovaries or hysterectomy is the only resort.
7. In submitting curetted tissues to the pathologist it is imperative that the relation of the time of the curetting to the time of menstruation be stated, in order to obtain an opinion of value.

HENRY SCHMITZ.

Jones: Inversion of the Uterus, with a Report of a Case Occurring During the Puerperium and Caused by a Fibroid. *Surg., Gynec. & Obst.*, 1913, xvi, 632.
By Surg., Gynec. & Obst.

Inversion of the uterus is a very rare pathological condition and usually is caused by child-birth. It occurs once in about 128,000 obstetrical cases. Not only did the author's case develop a comparatively short time after labor, but it had in addition a fibro-myoma as a causative factor. Tumors of the uterus produce only about 13 per cent of the inversions, and when present are usually the sole cause, entirely independent of pregnancy. An extensive review of the literature in connection with this case leads to the following conclusions:

1. Etiology. In obstetrical inversion, the primary cause is uterine relaxation. The chief secondary factors are pressure on the fundus and traction on the cord. In inversion not obstetrical in origin, uterine fibroid is almost the exclusive cause.
2. Pathology. Most cases are both acute and complete; in the complete cases, the most important point is the degree of contraction of the cervix. In inversion of gynecological origin, the causative tumor is of preëminent importance.

3. Symptoms. In acute cases, the cardinal symptoms are hæmorrhage, shock and pain. Later, the manifestations of a complicating infection may appear. In chronic inversion, the symptoms are those of marked uterine prolapse plus those of menorrhagia and metrorrhagia.

4. Diagnosis. This is made from the objective findings exclusively; in obstetrical inversions it is almost always very easy. Vaginally, a large, soft, pear-shaped, bleeding tumor is found, with the placenta attached in about half of the cases. Abdominally, no corpus is found, but instead there is a cuplike depression. In gynecological cases, the diagnosis of inversion due to a fibroid frequently is very difficult. The chief points are: first, the shortening of the uterine canal produced by inversion as compared with the lengthening caused by a fibroid; and secondly, the indentation produced by the inversion on the peritoneal surface.

5. Prognosis. The mortality in acute cases in recent years has been about 35 per cent; in chronic cases, about 6 per cent.

6. Treatment. In all acute and in most chronic cases, the manual reposition should be tried. In most of the former, if undertaken early, and in many of the latter this procedure is successful. If it fails, repositors, etc., may be used, but only for a short time. If these are unsuccessful, one should resort at once to some operative method, the one of choice being colpohysterotomy. This operation stands preëminent in the treatment of difficult cases of uterine inversion on account of the facility of its performance and its success in accomplishing the reduction of the inversion, and also because of the practically complete absence of any mortality. The uterine incision should be made at first through the cervix only, and later should be extended as far into the corpus as necessary to accomplish reposition. In inversion due to tumor, the treatment is mostly that of the causative fibroid. After this is removed, if the uterus still remains, spontaneous replacement occurs, in about one third of the cases, while in the other instances reduction is accomplished usually without difficulty by non-operative methods. A case is reported in detail.

Donald and Shaw: Retroflexion of the Uterus. *Practitioner*, Lond., 1913, xc, 961.

By Surg., Gynec. & Obst.

These authors have compiled statistics with reference to symptoms commonly associated with retroflexio uteri. These symptoms are menorrhagia and metrorrhagia, dysmenorrhœa, chronic pain, miscarriage and sterility. As a result of this study they find that, in the majority of cases, these symptoms or complaints are not present in uterine retroflexion. The subsequent histories of 267 patients who were curetted for this condition have been collected. Of these 86 per cent were cured or much improved. As a result the authors argue strongly in favor of curettage alone rather than a suspension operation. Their conclusions are:

1. Simple mobile retroflexion of the uterus seldom, if ever, causes symptoms.

2. A patient with a mobile retroflexed uterus, suffering from any of the symptoms mentioned and who has not improved with a course of drugs, should have the uterus dilated and curetted.

3. Any fixation operation is unjustifiable in these cases until curettage has been given a trial.

4. If curettage has failed to improve the condition within twelve months of the operation, a fixation operation may be advised.

5. In almost all the cases in which curettage has failed, some condition other than simple retroflexion will be found.

CAREY CULBERTSON.

Andrews: An Unusual Case of Rupture of the Uterus. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 272. By Surg., Gynec. & Obst.

The patient was 32 years old and had had two previous instrumental deliveries. In her third labor the accoucheur had pulled the head through the brim of the pelvis with the forceps with great difficulty. The child was born alive with the occiput anterior, and the placenta was removed by hand. No anæsthetic was employed. Twenty-four hours later the patient's condition was grave. The swollen, lacerated cervix protruded three or four inches from the vagina, it being very dark in color and giving off an offensive odor. Examination showed (1) an incomplete rupture of the perineum, (2) the vagina was completely separated from the cervix except for about three inches in front and to the right side, (3) the lower uterine segment and cervix were separated from the upper segment except on the right side and in front, (4) the lower uterine segment and cervix were torn through from top to bottom on the left side. A large quantity of blood was found in the peritoneal cavity. Vaginal hysterectomy was undertaken, the greatest difficulty coming in the separation of the bladder from the cervix. The torn left uterine artery could not be found. The anterior and posterior peritoneum and the vaginal walls were sewn together, a large drainage tube was inserted and the perineum was repaired.

Recovery eventually took place after four and one-half weeks of pyrexia. Andrews believes that the accoucheur must have applied the forceps outside the uterus, the cervix and the lower uterine segment being pulled away with the head by main force.

CAREY CULBERTSON.

ADNEXAL AND PERIUTERINE CONDITIONS

Abel and McIlroy: The Arrangement and Distribution of the Nerves in Certain Mammalian Ovaries. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 240. By Surg., Gynec. & Obst.

The authors briefly review the literature of this subject, giving the methods of investigation and the results of the work. The latter may be briefly summarized as follows:

(1) The ovary in the cat, dog and rabbit is richly supplied with nerves which enter at the hilum.

(2) In the ovarian tissue the nerves are divided into three sets, a vascular, follicular, and an interstitial set, which all anastomose.

(3) On the course of the nerves numerous varicosities are seen, while groups of very small cells are found in connection with the interstitial set.

(4) The follicular nerves lie in the tunica intima and externa and do not pass into the membrana granulosa.

(5) The function of the ovarian nerves is primarily vasomotor.

C. D. HOLMES.

Rathe: Pseudomyxoma Peritonei with Involvement of Ovaries and Appendix (Pseudomyxoma peritonei mit Beteiligung der Ovarien und der Appendix). *Monatsschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 322.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient, married and 41 years old, was first operated upon in 1901 for bilateral ovarian tumor, the left the size of an adult head, and the right the size of a fist. The left tumor ruptured during its removal and a gelatinous pseudomucinous fluid escaped. The right one was also removed and showed the same characteristics. Gelatinous fluid was found free in the abdominal cavity. An uneventful recovery ensued. The patient entered the clinic again in 1912. In the scar a mass was found the size of a hen's egg, consisting of a pseudomucinous growth in the peritoneal portion of the abdominal wall. Metastases were not found within the abdomen. The patient entered the hospital the third time seven months later. The general condition was bad, a number of tumors being palpable in the abdomen. During the operation tumors were found at the place of resection of the right ovary, in the peritoneal covering of the bladder and disseminated throughout the entire omentum. The appendix also was cystic, being 8 cm. long and 4 cm. broad. The tumors were removed as far as possible, but the patient was discharged unimproved. The author recognizes the typical course of the disease, which coincides with the investigations of Werth, Olshausen and others. The epithelium is disseminated and continues to proliferate, as determined by microscopical examinations.

In 1901 Fränkel of Hamburg proved that the disease may originate from the diseased appendix. Several analogous cases have since been described. It is remarkable that these cases always terminate favorably while those originating from ovarian disease do not. The author contradicts the statement of Meyer that pseudomucinous tumors of the ovary are secondary and that pseudomyxomata peritonei is usually derived from the appendix. JUNGHANS.

Tuffier: The Grafting of Human Ovaries (Les greffes ovariennes humaines). *J. de chir.*, 1913, x, 529. By Surg., Gynec. & Obst.

Tuffier, having demonstrated that suppression of menstruation and not loss of ovarian function is

the cause of post-operative trouble following castration, presents a study of the results obtained by preserving the menstrual function through ovarian grafts. A series of 130 cases proved that ovarian autografts alone are capable of ovulating and of maintaining the menstrual function.

The author's technique is as follows: Given a case of salpingitis in which the uterus can be conserved, the tubes and ovaries are removed. The ovaries are immediately grafted in the loose subperitoneal cellular tissue, one on each side of, and 5 or 6 cm. distant from, the median incision, which is then closed in three layers. Even if the ovary be "sclerocystic" it is valuable for grafting if it be aseptic. The author strives to place the hilum of the gland next the aponeurosis.

Of 44 patients operated upon in this manner, the author has seen 19, 18 of whom have menstruated, 14 having been followed for more than 11 months. All have had the following sequence in ovulation and menstruation: Increase in volume of one ovary, then, 3 to 10 days later, menstruation with disappearance of the ovarian tumefaction. This phenomenon is not witnessed until from 3 to 7 months after the operation. The vitality of the ovarian grafts has been demonstrated in two cases which required the removal of the grafted ovary. Voluminous arteries and veins were demonstrated at the periphery of the grafts.

The author has observed that from the date of operation until the reappearance of menstruation the patients suffer from the usual effects of castration before the menopause even if the transplanted ovaries undergo their characteristic swelling. As soon as menstruation sets in, all the accidents consequent upon castration disappear. The obvious conclusion is that menstruation and not ovulation is the more important for physiological equilibrium.

These ovarian grafts do not functionate indefinitely. The distant results, from one to five and one-half years following operation, show that of 14 patients only three menstruate regularly as regards quantity and periodicity; 2 are regular but have had menorrhagia, 4 are irregular, 3 after 2 years have seen progressive disappearance of menstruation, 1 had menorrhagia with prolonged menstruation, and finally 4 had pain either at the site of the graft or in the uterus, and in 2 cases, after lapse of $3\frac{1}{2}$ years, the graft had to be removed. While in some cases the new life of the graft with normal function is shown by normal menstruation, in other cases it adapts itself badly to its abnormal nutrition and ends by atrophy.

The author finally concludes that in young women, particularly if they suffer from hyperthyroidism in the presence of inflammatory lesions requiring resection of the adnexa, the uterus should be left in place if it can be conserved, and one or both ovaries should be grafted. Thus menstruation is secured for a greater or less period of time and the physiological equilibrium of the patient is assured.

ELLIS FISCHEL.

Harms: Transplantation of Ovaries into Foreign Species; Second Report (Überpflanzung von Ovarien in eine fremde Art; Mitteilg. 2). *Arch. f. Entwicklungsmech. d. Organism*, 1913, xxxv, 748.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The question considered was: Has the host of the transplanted ovary the power of influencing the germ-plasm? The ovaries of foreign species of tritons were transplanted into the domestic triton, and the two animals kept in symbiotic relationship for some days before the ovary was entirely transferred. In this way the effects of the foreign albumen was avoided. The implanted ovaries lived and produced eggs, but the offspring was that of the domestic triton. This shows that the host had no influence on the germ-plasm of the transplanted ovary.

GRÄFENBERG.

Rössle: The Effect of Castration on the Hypophysis (Über die Hypophyse nach Castration). *München. med. Wchnschr.*, 1913, lx, 952.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The relations existing between the hypophysis and the genitalia are antagonistic. The experiences obtained in the study of acromegaly, dystrophia adiposo-genitalis, and the investigations after extirpation of the hypophysis all speak for that fact. On the other hand, in cases with primary changes in the genitalia more or less typical changes in the hypophysis also result, such as hypertrophy during pregnancy and the well known changes occurring in animals following castration.

The author investigated the matter on 101 hypophyseal glands. A definite enlargement of the gland by weight could not be demonstrated regularly under the conditions under which the castration had to be conducted. That in part is due to the age and the cachetic condition of the patients in whom it was necessary to extirpate the genital glands. If this extirpation occurs during the climacterium but few changes are demonstrable in the hypophysis; whereas if it occurs in younger persons the hypophysis reacts in a very short time to the removal of the ovaries or of the entire pelvic viscera and this even in the presence of severe general disease. Histologically a hyperplasia of the eosinophile cells occurs at the expense of the principal cells and especially of the basophilic cells. A special phenomenon characterizes the latter, i. e., their abundance in areas of the hypophysis in which normally but few are found.

RUNGE.

Cope and Kettle: A Case of Chorio-Epithelioma of the Fallopian Tube, Following Extra-Uterine Gestation. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 247.

By Surg., Gynec. & Obst.

The patient was 45 years of age and the mother of two children. Two years after the birth of her second child, which lived 17 days, she was told she had a fleshy mole. Three years after this she was seized with abdominal distress characterized by great pain, with vomiting and unconsciousness. Vaginal

examination showed an enlarged painful swelling in the left fornix. These symptoms subsided after three weeks rest in bed. One year later she came to the hospital for constipation and vomiting with a diagnosis of intestinal obstruction. On abdominal section a large mass filled the pelvis. The growth had its origin in the right side of the pelvis. There was no trace of the right fallopian tube. At the end of the third week she began to complain of pain in the right iliac fossa. She had some temperature and on opening the abdomen a second time a dark red mass was seen between the cæcum and the right brim of the true pelvis, also filling the right half of the pelvis. On removing some of the firmer portions, great difficulty was experienced in stopping the flow of blood. The patient died in a few hours.

On post-mortem examination both uterus and vagina were found to be normal, and since portions of normal ovarian tissue were found in the midst of the material removed at the first operation, and since the only traces of fallopian tube seen on that side were in the microscopic sections, there seems to be little doubt that this was a case of tubal chorio-epithelioma. The material removed at the first operation was also chorio-epitheliomatous.

From the clinical aspect the following conclusions are offered:

(1) Chorio-epithelioma of the fallopian tube has no special age of incidence.

(2) It is sometimes accompanied by a previous history suggestive of a waning vitality of the fertilized ova.

(3) The symptoms are usually those of tubal gestation followed after a period of quiescence by tumor formation and wasting. In a minority of cases uterine hæmorrhage and hypogastric pain may be all that is noticed.

(4) Sometimes a vaginal nodule first calls attention to the condition.

(5) In any suspected case abdominal section is to be advised.

(6) All tubal gestations which have been operated on should be carefully watched for a considerable period after operation.

(7) If the growth is at the angle of the uterus hysterectomy is advisable.

(8) The prognosis is unfavorable, but can never be given with certainty because recovery has taken place even when secondary deposits have formed.

(9) The origin of the tumor is from the perverted growth of the chorionic villi in a tubal mole.

C. D. HOLMES.

EXTERNAL GENITALIA

Pozsonyi: The Surgical Treatment of Primary Carcinoma of the Vagina (As elsődleges hüvelyi rákok műtéti kezeléséről). *Budapesti orvosi ujsag, Sebeszet*, 1913, ii, 16.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author circumcises the vagina in the introitus, forms a cuff, closes the vagina and anus. Then he

makes an incision through the skin from the sacrum to the anus, removes the os coccyx and isolates the rectum on all sides. The cutaneous incision is then carried to the vagina after a circular incision is made about the anus. The muscles of the pelvic floor are cut through and the rectum and vagina are pulled down. The urethra and bladder are freed from the vagina, the ureters are pushed up, the plica vesico-uterina is cut and the uterus and adnexa are pulled down. The two spermatic arteries are ligated. The round and uterine ligaments also are tied. The latter, as well as the parametria, are then dissected. The flexure of the colon is then isolated so that the rectum may come down readily. The peritoneum is then closed, and deep retention muscle sutures are made with silk. Gauze drainage is provided for through the middle of the wound, ending near the sigmoid and peritoneum. After the wound is closed the rectum is cut through and an anus sacralis is established. Recovery was rapid and the patient was well six months after the operation. The stool is regulated by means of controlling the diet.

FRIGYESI.

Bandler: The Importance of the Inverted T-Incision in Vaginal Surgery. *Med. Rec.*, 1913, lxxxiii, 1164.

By Surg., Gynec. & Obst.

The author strongly advocates the use of the T-incision in all gynecological cases where the vaginal route is considered in operating on multipara. Such operations as the following he does with this incision: Anterior fixation, vaginal fixation, correction of cystocele, retroflexion, vaginal hysterectomy, salpingectomy, etc.

The procedure is simple. A transverse incision is made around the cervix in the anterior fornix; then the bladder is stripped off of the anterior wall of the uterus. This discloses the vesico-uterine fold of peritoneum which can be opened under guidance of the eye. The bladder is now stripped from the anterior vaginal wall and this wall is split longitudinally, beginning in the center of the transverse incision. The author claims this will make as large an opening as the average abdominal incision, and there is no danger of perforating the bladder.

EUGENE CARY.

Kurg: Esthiomene, or Lupus Vulvæ. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 353.

By Surg., Gynec. & Obst.

This is an elaborate historical, pathological and clinical study, including an analysis of six cases, with three tables and then microphotographs. The author's summary is as follows:

1. Nomenclature. The term esthiomene has been misunderstood and misapplied by many authors. It should be retained as a useful term replacing the expression "hypertrophy with ulceration." It should be clearly understood that it is a tertiary syphilitic lesion. "Lupus vulvæ" should be replaced by the expression "tuberculosis of the vulva," tuberculous ulceration and hypertrophy

occurring in the perineal region, while lupus vulgaris, as found in the skin of the face, does not. Elephantiasis is a term applied to hypertrophy occurring in chronically oedematous parts whence the return of lymph has become obstructed or rendered sluggish, and where, owing to the unhealthy state of the enlarged parts, a low form of chronic inflammation has set up. The hypertrophied masses of esthiomene are not oedematous tissue enlargements; they are granulomatous growths with a tendency to necrosis.

2. The nature of esthiomene. It is not a disease *sui generis*, nor a form of low chronic ulceration occurring on a soil weakened by constitutional syphilis or tuberculosis. It is not a merely local inflammatory state following on irritation. There is no relation between it and tuberculosis. The only connection between esthiomene and malignant disease is that the former may occasionally undergo malignant degeneration. It is not due to lymph stasis; hence it does not belong to the group of hypertrophies called "elephantiasis."

3. Esthiomene is a tertiary syphilitic manifestation. (a) A direct or probable history of syphilis is almost always obtained. (b) The majority of early cases respond to antisyphilitic treatment, those later or chronic cases not so responding being no indication that esthiomene may at times be due to other causes than syphilis. (c) The chronic course of esthiomene marked by attempts at healing with subsequent relapses, the absence of local disturbances, the non-impairment of the general state of health indicate the syphilitic nature of the condition. (d) The masses of cicatricial tissue with subsequent contraction producing severe strictures and extensive deformities is typical of no other disease. (e) In no other constitutional disease is there such a constantly present combination of hypertrophy and ulceration as in syphilis. (f) The microscope reveals the typical gumma or granuloma of the third stage. (g) Up to the present time we find no cases recorded where the spirochæta pallida was found in esthiomene tissues. (h) The positive Wassermann reaction will certainly in time relegate all cases of esthiomene into the field of tertiary syphilitic lesions.

CAREY CULBERTSON.

Hazen: Perineorrhaphy with the Buried Layer Stitch. *Internat. J. Surg.*, 1913, xxvi, 214.

By Surg., Gynec. & Obst.

The author points out the objections to the old Emmet operation, especially the disadvantages of the "mass stitch" or "crown stitch." This stitch fails to bring the parts back into correct anatomical position, layer by layer, and often allows gaps to form between the deep portions. The same objections would seem to hold good here as hold in the old method of using the mass-stitch for closing the abdominal wall. Not only are the parts not approximated accurately but many times the only layers which are at all approximated are the very superficial.

With the author's method the perineum is restored

layer by layer. First the levator ani muscles are freed and brought into plain view. They are then sutured with strong chromic gut. The deep fascia is then identified and sutured in the same manner. The superficial fascia is next sutured. All of the foregoing sutures are buried. The skin is closed with some non-absorbable material.

J. H. SKILES.

Schabak: Primary and End Results of the Operative Treatment of Perineal Lacerations, Vaginal and Uterine Prolapse Through Restoration of the Pelvic Floor (Primäre und Dauerresultate bei operativer Behandlung der Darmrisse, Scheiden und Uterusprolapse durch Herstellung des Beckenbodens). *Med. Rundschau*, 1913, xl, 630.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The material consisted of 516 cases. Of these there were 150 cases of perineal lacerations without any vaginal or uterine prolapse; 219 with prolapse of vaginal wall in various grades; 143 with incomplete, and 4 with complete, prolapse of the uterus. The author is of the opinion that prolapse of the vagina and uterus occurs in 90 per cent of multipara and in 3 per cent of nulipara. The degree of prolapse is directly proportional to the number of births. The disease is chronic. The first evidence manifests itself after the first birth in 45 per cent; in 6 per cent after following births; in 30 per cent after the last labor and in 19 per cent during the climacterium. In 2 per cent, the acute prolapse is due to external trauma of the perineum and is accompanied by shock. The weakness of the pelvic floor, the retroversion and the prolapse are closely associated with child-birth. A complete laceration of the perineum rarely results in prolapse of the uterus and vagina. The best results of the operative restoration of the pelvic floor are obtained by a colpoperineorrhaphy.

The longest observed case dates back eleven years, the shortest nine months. The primary operative results were: 508 complete recoveries, 3 deaths, 5 cases discharged uncured. Eight recurrences were observed among 159 patients who appeared for re-examination or answered by mail. Absolute cure therefore 94.6 per cent. Mortality rate was 0.2 per cent.

The author advises high amputation of the cervix in elongated and hypertrophied cervixes, anterior colporrhaphy in cystocele, V-shaped excision in chronic metritis and curettement in endometritis as valuable aids in restoring the pelvic floor. They add materially to the primary and end results. As in 55 per cent of the labors following the operation a laceration occurs, the author advises a perineotomy for its prevention.

KRINSKI.

MISCELLANEOUS

Hartmann: Extravesical Opening of the Ureter in Women (Über die extravesicale Ausmündung der Harnleiter bei Frauen). *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, 69.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This patient was 49 years old and had been suffering with incontinence for 25 years. Although

she had noticed it on exertion even before that time, she alleged that a delivery when she was 24 years old was the cause of her trouble.

Examination showed that the sphincter of the bladder was intact but that there was a small opening in a bladder-like dilatation, the size of a grape, in the vulva behind and to the left of the urethral opening. The little sac emptied and filled itself rhythmically and urine came through the accessory opening. Intra-muscular injections of indigo-carmin solution demonstrated it to be a case of accessory ureter. The author performed the Stöckel operation by the vaginal route, whereby the abnormal ureter was implanted into the bladder. The result was very satisfactory.

The author then discusses the 37 cases found in the literature (13 of these being reported by the author himself). He lays stress on the dilatation of the distal end of the ureter. The only treatment is surgical. Briefly the facts of the nineteen operated cases are:

Operation	Successful	Unsuccessful
Ligation of distal end.....	1	
Intravesical ureterocystotomy.....	2	
Vaginal ureterocystotomy.....		5
Implantation		
Abdominal route.....	2	1
Extraperitoneal route.....	1	
Vaginal route.....	4	2
Resection of kidney.....	1	

Therefore the implantation method is the operation of choice. In adults, the vaginal route, and in children, the abdominal, give the best results.

DORN.

Voigts: Mesothorium as a Substitute for X-Rays
(Mesothorium als Röntgenstrahlenerersatz). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports experiments conducted for the purpose of replacing the X-ray treatment of menorrhagic metropathies and fibroids with mesothorium. The preparation is enclosed in tubes 20 and 50 mg. each, which are fastened to copper rods for insertion into the uterus. Lead and silver filters were used in thickness .08 to 1 mm. Climacteric hæmorrhages were easiest to influence, nine cases being cured within a short time. The result obtained in three cases of adnexal inflammation was surprising. By excluding the menstrual congestion, the inflammation quieted down, the symptoms disappeared, and in two cases a gradual but definite decrease in the size of the tumor occurred. Seven cases of menorrhagic metritis were more obstinate, yet amenorrhœa was also obtained. Eight cases of myomata were treated with variable results. Amenorrhœa resulted three times; two cases are still under treatment, and in three cases complete failure occurred.

Among the side reactions obtained, a collapse occurred once in addition to the transient tempera-

ture rise and slight general disturbances. In three cases burns of the vagina resulted due to prolonged treatment and the use of a thin filter. In one case an exudate formed in the cul-de-sac, and in two others a severe inflammation of the rectal mucosa resulted from very intense exposures. The author considers the treatment of hæmorrhagic metropathies and menorrhagias with mesothorium as superior to the X-ray treatment. For the treatment of myomata he advises a combined method of treatment.

Fraenkel: The Action of the So-Called Gas Bacillus upon the Female Genitalia (Über die Wirkung des sogen. Gasbacillus auf den weiblichen Genitalapparat). *Klin.-therap. Wchnschr.*, 1913, xx, 485.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The principal action of the gas bacillus is its invasion of the deeper lymph spaces. The development of gas separates the muscle fascicula, causing their necrosis. The author found the gas bacillus in all of the cases investigated by him, but states that other anærobic organisms may produce similar results. The prognosis in all cases of physometra is bad, even if the uterus is removed. Much more favorable are cases of tympania uteri, produced by an invasion of the amniotic cavity. A cure is effected frequently by rupture of the membranes alone. The dark bronze and blue cyanotic discoloration of the skin seen in cases of physometra was absent in the author's second case.

Serious results were observed only when bacilli entered deeper tissue spaces. Removal of placental rests suffices in the superficial infection of the inner surface of the uterus, even if bacilli enter the blood stream. The author is not certain that the small vesicles occurring in the vaginal mucous membrane of pregnant women (colpohyperplasia cystica (Winckel) or pneumatosis cystoides vaginalis) are due to the gas bacillus. He found bacilli in three cases, but had no opportunity to make cultures. The giant cell-like structures described by Chiari were also found by him in the inner wall.

WILLMANN.

Sella: Contribution to the Study of the Localization of Micro-Organisms in Experimental Septicæmia (Contributo allo studio delle localizzazioni genitali dei microorganismi nelle setticemie sperimentali). *Ann. di ostetr. e ginecol.*, 1913, xxxv, 206.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author classifies the different results of pathological and anatomical investigations of the female genitalia in women who died of acute infections, as scarlet fever, measles, typhoid, acute articular rheumatism, etc. Experimentally he injected cultures, varying in age and dilution, obtained from a carbuncle, into a vein of the ear or into the peritoneal cavity of guinea pigs. Streptococcus and staphylococcus aureus cultures were also used. All the guinea pigs died of the infection. The ovaries and the uterus were rarely the seat of abscesses; the

tubes never showed any lesions. The bacilli of the carbuncle were found in the uterus, tubes and ovaries; in the latter organs especially in the germinal zone. Staphylococci were found only exceptionally in the uterus or in the ovaries. It was never possible to obtain metastases of staphylococci in the tubes.

BERBERICH.

Kroemer: The Action of Mesothorium upon Genital Tumors (Mesothorium-Einwirkung auf genitale Neubildungen). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kroemer reports twenty-two cases, most of which were inoperable tumors, which he treated with mesothorium and with deep applications of the X-rays. Simultaneously the treatment was augmented with the use of Thorium X. Although the results were less satisfactory in far advanced metastatic, ovarian and intestinal cancers, nine cases of cervical cancer which were deemed inoperable improved so much that the uterus regained its movability in seven cases and a radical removal was accomplished. In one instance a radical operation could not be undertaken on account of a septic endocarditis following abortion. Similarly good results were obtained in two cases of corpus carcinoma, one with vaginal metastases; also in one case of rodent ulcer of the vulva. In the last case a spontaneous cure could have been awaited had not a coincident pruritus vulva demanded amputation. The patient was of the type in which hypersusceptibility to mesothorium exists and who consider the little capsule as a veritable "fire capsule." The extirpated inguinal glands show morbid infiltration with migratory and plasma cells, but no carcinoma cells.

In all operated cases the incision scar was treated with mesothorium for two to three hours a day during convalescence. An injury to the healthy tissues was not observed; harmless erythema and vesicle formation on the skin receded immediately with bismuth paste. The quantity of the rays administered varied. In cervix cancers the dosage was 3000-7000 mg. hours of mesothorium, augmented by several series of X-rays, which were given every ten to eleven days to 100 H. The patients at the same time were given thorium X per os in dosage of 100 e. s. E. For the local treatment thorium X (500-1000 e. s. E.) was given in the form of ointment, tampons and compresses. It was also employed in aqueous solution for hypo-

dermic injections in three cases of glandular recurrence. Aluminum and silver capsules were used as filters. The results were always controlled on the later extirpated organs and once on autopsy findings. An absolute cure of the cancer was only obtained twice. Glandular metastases were the least influenced; and of the primary tumors, those which spread toward the vagina and external surface. Deep, living carcinomatous tissue could be demonstrated in most organs.

Although the result obtained is much behind the expectations, the author nevertheless believes that the treatment with mesothorium and thorium X, supplemented with the X-rays, adds much to complete carcinoma therapy. It promises permanent cure in all external cancers of the cervix, vagina and vulva. It aids the operative therapy in so far as it improves inoperable cases; at least it does away with the sloughing and fetor. The glandular metastases have so far not been influenced favorably.

Falgowski: The Operative Treatment of Old Infiltrations (Zur operativen Behandlung alter Infiltrate). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Falgowski considers the puncturing of infiltrations through the vagina with drainage not always sufficient, as thorough drainage is not obtained or maintained long enough. Infiltrations high up are not reached, or only with difficulty. It is also impossible to secure a lasting replacement of the uterus. The author, therefore, in all chronic exudates which do not improve under conservative treatment, employs a more radical procedure. He performs an anterior and posterior colpotomy; blunt separation of the uterus from adhesions; thorough manual examination of the entire pelvis; deep vagino-fixation, and wide drainage of the entire pelvis through both colpotomy wounds. The gauze drains are saturated in 5 to 10 per cent camphorated oil. This is renewed several times.

The procedure requires from three to five weeks and the exudate disappears with the correction of the uterine position. In older women the uterus may be removed entirely. The author cured four cases in this manner. The operation is without danger, as all work can usually be done extra-peritoneally. Injuries to other organs are always prevented. The disturbances in the urinary and nervous systems are likewise favorably influenced.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Hauser: Quadruplets and Their Mothers (Vierlinge und Vierlingsmütter). *München. med. Wchnschr.*, 1913, lx, 812.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A 29-year-old quintipara gave birth to living quadruplets in the 28th to 30th week of pregnancy. The babies died within the first 24 hours. They were practically of equal size. Examination of the placenta revealed the fact that it was a case of two pairs of twins with three placentæ. The one pair came from two eggs, the other from one egg with one amnion. The author discusses the various hypotheses that might explain the possible origin of the two groups. His review of the literature and statistics shows that:

1. The mothers of quadruplets are, on an average, older than the mothers of triplets, and the latter older than those of twins.

2. The number of primipara giving birth to more than one child decreases with the increase in number of children of a pregnancy.

3. The mothers of quadruplets are nearly all multipara (VI-paræ or even more); the mothers of triplets and twins are also multipara (II- to V-paræ).

EISENBACH.

Füth: A Further Contribution on the Displacement of the Cæcum During Pregnancy

(Weitere Beiträge zur Verschiebung des Cæcums während der Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In a five months' pregnant woman who had never had any trouble in the ileocecal region, Füth found the cæcum, the adnexa and the omentum glued to the posterior wall of the uterus and containing an abscess in which the appendix could not be found. The abscess was three to four fingers breadth above, and lateral to, the anterior superior spine. It was possible to bring down the cæcum without traction to the iliac fossa and fix it there. The trouble probably commenced with adhesions between adnexa and appendix, and the cæcum was drawn along with the appendix. There were no congenital anomalies of the ligaments or mesentery of the cæcum or ascending colon.

The author's observation has been corroborated by Korn, Babler, Schmitt and Cook, as well by the anatomical preparations of Hahn. A very valuable corroboration is offered by the studies of cæcum mobile and particularly by the fact brought out by Dreyer at autopsies that 75 per cent of all women possess an abnormally movable cæcum, whose movability extends downward to the small pelvis as

well as upward to the edge of the liver. In spite of all this the author does not consider the question of displaced cæcum during pregnancy as definitely settled and is not surprised that Renvall was unable to demonstrate a marked displacement of the cæcum in two women operated on during the sixth month of pregnancy.

Jaschke: Diseases of the Kidneys During Pregnancy in Women Suffering from Heart Disease (Nierenerkrankungen in der Schwangerschaft herzkranker Frauen). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Normal pregnancy and especially labor put considerable demands on the heart, which may be dangerous. Although this hardly holds good for valvular lesions, it does pertain to diseases of the myocardium occurring either alone or with valvular lesions. Accordingly, it is evident that pregnancy complicated with heart and kidney disease is very dangerous. This applies only to such renal diseases as cause an increase in the work of the heart muscles; i.e., hypertony which is clinically evidenced by hypertrophy of the left chamber and finally by hypertrophy of the entire heart. The acute pregnancy kidney is not of any importance. Even if it is accompanied by a slight increase in the blood pressure, the latter may easily be combated by dietetic measures. In the chronic pregnancy kidney the blood pressure is markedly higher (170-180) and the work of the heart is increased. Yet by proper treatment the blood pressure can be kept within moderate limits. The occurrence of eclampsia is dangerous because it severely strains the heart. The highest demands are put on the heart by the so-called chronic nephritis in graviditate. It is impossible to distinguish the latter from the chronic pregnancy kidney. The high and persistent increase in blood pressure up to 250 or more, which is uninfluenced by treatment, explains why occasionally a well heart, and almost always a diseased heart, succumbs. The only help lies in removing the increased demands placed upon the heart by interrupting the pregnancy.

Jaschke: Kidney and Pregnancy (Niere u. Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The relationship between high blood-pressure and low urine and chlorine elimination, suggested by Zangemeister is very misleading. In the first place, it is more complicated than he believes, and secondly, the decrease in the amount of urine and chlorides is

due to the increased perspiration. Polyuria is just as easily possible with a high blood-pressure as is oliguria. The amount of chloride eliminated is dependent on the amount of consumption and the avenues of exit. In no case can the kidney of pregnancy be explained on the ground of increased capacity of reaction.

Schmidt: Heart and Kidney Affections During Pregnancy (Herz- und Nierenkrankheiten in der Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb

In practice the value of auscultatory findings in cardiac diseases is still overrated. The intensity of the murmur and the accentuation of tones are by no means parallel to the degree of defect. This is true also for initial stenosis, although this affection occupies a somewhat individual position. Of far more importance are the size of the heart, pulse changes, prolonged congestion of the liver, and lesser circuit, and, above all, functional ability and reserve force of the cardiac muscle. Not every break in compensation has the same significance in rendering a prognosis. The latter is dependent on the cause of the break, and how it responds to rest in bed and to digitalis. Myocarditis, although aggravated by pregnancy, is by no means always an indication for a therapeutic abortion. There are also many milder cases with slight arrhythmia and tachycardia, which are not indications. Between these there are many transitional forms. The milder forms of myocarditis following angina and other infections are due to bacteriotoxins. The question arises whether the cardiac muscle is affected more by the toxæmia incident to pregnancy or whether it is due to mechanical strain. Schmidt does not desire to go into detail in regard to the toxæmias of pregnancy, but says that, as Lutz has proven, there is a disturbance of balance of the organs of internal secretion quite frequently.

Definite rules cannot be laid down in regard to treatment. A break in compensation during the first half of pregnancy in combination with nephritis does not always indicate an interruption of the pregnancy. The author does not agree that obstipation causes the migration of germs through the bowel wall, but believe that it is catarrh of the bowel. The supposed lymph vessels between the colon and the pelvis of the kidney are still problematical. Colon infection for the bowel may also cause pulmonary, cardiac and renal disease, but only rarely pyelitis. According to Schmidt, the infection of the renal pelvis probably arises from the genital organs.

Stoeckel: Kidney Disease and Pregnancy (Nierenerkrankung und Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author desires to make three points: First, that the kidney insufficiency in pregnancy is becoming more and more confusing, especially when only

the urinary findings are considered. At best, the urinary findings are only relative; the condition of heart and blood pressure are the deciding points. Second, a tuberculous kidney should be removed during pregnancy as well as at any other time. The pregnancy will not be compromised on that account, and the old theory that a serious additional strain would be thrown on the kidney is shattered by recent experiences. Women with one healthy kidney stand pregnancy surprisingly well. Third, the author believes that the pyelitis of pregnancy is merely a recurrence of a pyelitis which originally occurred during childhood. This is based on the fact that colon bacilli remain in the urine for many years after an attack of pyelitis in spite of treatment. He advises the combined treatment, the medicinal and dietetic as well as the surgical, with repeated pelvic irrigations. For the treatment of pyelitis of pregnancy the author is convinced that after a thorough trial of the internal treatment a therapeutic abortion is indicated to prevent severe injury to the kidney.

Fetzer: Kidney Function in Pregnancy and in the Toxæmias of Pregnancy (Über Nierenfunktion in der Schwangerschaft und bei Schwangerschaftstoxicosen). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author conducted functional tests of the kidneys on numerous cases of pregnancy. He made five hundred NaCl and nitrogen determinations. From the usual kidney of pregnancy definite amounts of NaCl and nitrogen are excreted in one to two days, the nitrogen a little more rapidly than the NaCl. In other cases NaCl is alone retarded. The excretion of albumin, however, does not parallel the retention of NaCl. On a liberal salt-containing diet a retention of NaCl occurs without the immediate appearance of oedema. These cases demand a salt-free diet. A pure milk diet is not ideal as it is too poor in iron and contains too much nitrogen. Such cases are recognized only by early functional tests.

In eclampsia the excretion of NaCl is prolonged and increases; nitrogenous products also are markedly increased. This increase, however, does not show itself as in the ordinary kidney with increase in concentration, but by an increase in the quantity of urine. As soon as the eclampsia ceases the kidney resumes its function almost immediately; therefore a diseased kidney can hardly be taken to exist in eclampsia. Toxic influences must play a part analogous to anaesthesia, which inhibit the function temporarily and in particular the function of the kidney vessels. The persisting hypersusceptibility of the vessels during the puerperium also speaks for this fact. The total nitrogen of the blood is not increased in eclampsia. Therefore there can be no accumulation of globules in the blood. The nitrogen of end products, however, is moderately increased. The determination of the cause of this retention will probably clear the matter still further.

Eckelt: The Function of the Kidney of Pregnancy and the Eclamptic Kidney (Über die Funktion der Schwangerschafts- und Eklampsieniere). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Having performed experiments in metabolism the author comes to the following conclusions: The function of the kidney of healthy pregnant women in regard to water, sodium-chloride, and N-elimination is equal to that of non-pregnant women. These are interfered with in the kidney of pregnancy. It is not possible to predict an eclampsia on these grounds before the pains begin. The same holds good for blood-pressure and percentage of albumen. After the pains of labor have begun, a decrease in the sodium-chloride seems to indicate eclampsia. A decreasing titer and high albumen do not make the prognosis of an eclampsia worse. Nor is the prognosis of a kidney of pregnancy made worse by a decrease in the titer and an increase in the amount of albumen.

The kidney of pregnancy and the eclamptic kidney have the identical anomaly in function. Comparative studies of the blood-pressure, oedema and disturbance of the function of the kidney lead the author to the conclusion that the kidney of pregnancy is the expression of a direct parenchymatous disturbance, brought about by a toxin in the circulation.

Holzbach: The Kidney in Pregnancy and Nephritis in Graviditate (Über Schwangerschaftsnieren und Nephritis in graviditate). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Holzbach thinks the term "kidney of pregnancy" is anatomically unjustifiable, for degenerative and inflammatory processes blend into one another in the anatomical as well as in the clinical picture. He suggests a careful study of each case, in order to determine whether an insufficiency of the kidney exists. Schlayer's function test is of great diagnostic aid; it often reveals a masked nephritis. Chronic nephritis may develop from a kidney of pregnancy. These investigations have no bearing on eclampsia, and the author intimates that the latter be treated differently than nephritis.

Mayer: Pyelitis and Its Relation to Pregnancy (Über Pyelitis und ihre Beziehungen zur Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Pregnancy is not the cause of pyelitis, but predisposes to it. Many cases of pyelitis are descending infections. Organisms enter the pelvis by the blood or lymph stream, and by pus foci near by. The recently described lymphatic connection between the colon and the right pelvis probably accounts for the occurrence of infection by way of the lymph stream and explains the greater frequency of right-sided pyelitis; although normal bowel flux do not

penetrate the normal bowel wall, abdominal flux may very easily penetrate a changed bowel wall. Pyelitis is frequently preceded by acute gastric disturbances with changed intestinal flux. The serologic behavior also indicates an increased virulence of the bowel organisms. Appendicitis deserves particular consideration in the etiology of pyelitis. Pyelitis frequently leads to an early interruption of pregnancy. The child, although at term, is frequently undeveloped. An improvement occurs usually with the onset of the puerperium, although there are numerous exceptions, and a genital infection may follow. During pregnancy pyelitis must be differentiated, especially from appendicitis, occasionally from peritonitis, puerperal infection due to criminal abortion, acute respiratory diseases, and genital hæmorrhages.

Opitz: Pyelitis Gravidarum (Neue Beiträge zur Pyelitis gravidarum). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports on the systematic examinations of bladder and kidney urine in 160 cases of pregnant women. Bacteria were found in almost $\frac{2}{3}$ of the cases, but a pyuria was present in only $\frac{1}{5}$ of them. *B. coli* was the organism most frequently found. Besides this most extraordinary varieties of organisms were isolated, even the yeast fungus being present in some cases. In the 160 women, twelve had a definite pyelitis. In addition there were four cases of pyelitis observed during the early months of pregnancy. As there were cases in which the kidney urine was sterile in the presence of a cystitis due to the usual pyelitis organisms, the author concludes that an ascending infection of the pelvis can hardly be questioned. The author does not deny the possibility of a lymphatic infection of the renal pelvis, but does not believe it occurs commonly, in view of the fact that cystoscopic examinations have proven that an ascending infection of the ureter occurs much more readily during pregnancy than at other times.

Kroemer: Etiology and Treatment of Pyelitis Gravidarum (Zur Ätiologie und Behandlung der Pyelitis gravidarum). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kroemer, from thirty-eight cases of pyelitis, thirty-one of which were pregnant, arrives at the following conclusions: (1) Pyelitis in numerous instances is a long drawn out disease with a tendency to recurrence. It frequently follows infectious diseases, gastro-enteritis, colitis, thrombophlebitis, polyarthritis and angina. (2) Pregnancy predisposes to recurrence as it may cause obstruction of the ureter, manifesting itself first as a hydro-ureter, and pyelctasis with bacteriuria. (3) Pelvic irrigations and drainages are to be considered only as symptomatic treatment, which must be augmented by vaccine therapy and prolonged observation. (4) A continuation of a one-sided pyuria after the puerperium must

be considered as due to a manifest kidney lesion, and surgical treatment would seem advisable. (5) The possibility of a tuberculous affection of the kidney or pelvis must be considered in each case. (6) Congenital anomalies of the ureters and kidneys, floating kidney, or stricture of the ureter due to obliterating urethritis, must be considered.

Weibel: Serological and Clinical Phenomena in the Pyelitis of Pregnancy. 1. Antibodies in the Maternal and Foetal Blood in Cases of Pyelitis of Pregnancy (Serologisches und Klinisches über Schwangerschaftspyelitis. 1. Über Antikörper im mütterlichen und fötalen Blute bei Schwangerschaftspyelitis). *Arch. f. Gynäk.*, 1913, xcix, 245.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Bacteriological investigations of the blood in cases of pyelitis, even in highly febrile cases, have always given negative results. The agglutination reaction in positive colon bacillus infection has been almost always negative. Weibel, therefore, demonstrated in eight cases of colon pyelitis of pregnancy the presence of haptens of the third order (Bordet-Gengou antibodies of the amboceptic type) using the complement fixation method. In all cases except one there were definite antibodies against the autogenous bacillus, in several cases antibodies in lesser quantity against foreign strains, but never any antibodies against any strain in normal serum. The investigations regarding bacilli found in the bowel were not uniform. However, in cases not infected no antibodies were produced against their own strain of bacilli in the bowel, and no immunity to their own flora. In all cases in which antibodies could be demonstrated in the mother they were present also in the child born of that mother, the sera of both usually being of the same type. Antibodies were found also in the amniotic fluid, but were much weaker in action. With the receding of the infection a drop in the immunity also occurs. In the serum of the infant the antibodies disappeared sometimes very quickly, at other times less quickly, a sign of passive immunity.

Weibel reports one case of particular interest, since a spontaneous recovery occurred during pregnancy without any treatment, characterized by disappearance of the antibodies from the blood, with sterile urine in the pelvis of the kidney and bladder at the time of labor. NITZSCHE.

Novak and Strisower: Concerning a Peculiar Form of Glycosuria in Pregnancy and Its Relation to Diabetis Mellitus (Über eine besondere Form von Glykosurie in der Gravidität und ihre Beziehungen zum echten Diabetes). *Deutsche Gesellschaft. f. Gynäk.*, 1913, May. By Surg., Gynec. & Obst.

The examination of fourteen cases of spontaneous glycosuria in pregnancy, conducted under known diets, led the authors to conclude that the glycosuria of pregnancy is usually entirely of renal origin. Sugar metabolism may be disturbed in individual cases, but oversensitiveness of the kidneys for sugar is usually to blame. In the last cases a combination of the two was noted. Real diabetes gives a very

poor prognosis: two cases in the last year in Wertheim's clinic died in coma. The normal content of sugar in the blood, failure of the clinical attributes of diabetes and the benign course distinguish the two forms. Careful clinical observation is necessary to distinguish the combined form. Hydramnios and intra-uterine fetal death are characteristics of real diabetes.

JAMES R. MILLER.

Shoemaker: Acute Membranous Vaginitis in Pregnancy Due to Enterococcus. *Penn. M. J.*, 1913, xvi, 703. By Surg., Gynec. & Obst.

Shoemaker cites two cases in which the enterococcus was the exciting cause of a severe vaginitis which began in the eighth month of pregnancy.

The symptoms were an extremely painful condition of the vulva and vagina with severe burning and itching. The patient was unable to sleep, and had to sit in a chair day and night. The vulva was swollen and the skin and mucous membranes reddened. A thick yellow-white discharge was present with non-adherent yellow masses in the vagina the size of a spoon bowl. The organisms in the first case were diplococci, or enterococci, while in the second case the streptococci, staphylococci, *Vibrio albacans* and fungus of thrush were associated.

Treatment: 1 to 100 solution of permanganate of potassium was used as a daily vaginal douche, while the vulva and surfaces of the vagina were painted daily with a fifteen per cent solution of argyrol. Both cases recovered within three weeks.

EUGENE CARY.

Sellheim: A Case of Rupture of the Uterus During Pregnancy (Ein Fall von Uteruszerreissung in der Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The tearing of the uterine wall in a 41-year-old woman, secundipara, must have begun in the first two months of pregnancy, for at that time she had had severe abdominal pain and internal hæmorrhage. The movements of the child were no longer felt after the seventh month, and five weeks later menstruation set in. The menses occurred every four weeks thereafter.

Examination of the uterus excludes ectopic pregnancy, for the old scar was plainly visible in the fundus. It was probably a case of premature separation of the uterine wall, where the placenta had been located, thus allowing the ovum to slip out into the peritoneal cavity. The placenta may have functioned a little longer, but it and the ovum soon died. The uterine wall repaired itself and the menstrual flow became re-established.

Bannister: A Case of Extensive Rupture of the Utero-Vaginal Junction with Escape of the Placenta into the Peritoneal Cavity. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 237.

By Surg., Gynec. & Obst.

The patient, 35 years of age and pregnant for the tenth time, had had nine forceps deliveries. After

she had been in the second stage of labor with right occipito-posterior presentation, the physician applied forceps, rotated the head and delivered a still-born child. Two hours later, as the placenta had not been delivered, and as a slight hæmorrhage was persisting, manual delivery of the secundines was attempted, but the hand passed easily into the abdominal cavity. The cervix was lacerated and there was a large tear in the posterior vaginal vault. On opening the abdomen the peritoneal cavity was filled with blood and the placenta lay in front of the left kidney. The rent extended laterally over both utero-sacral folds into the pararectal pouch on either side, while below it reached the lowest limit of the pouch of Douglas.

As the case had been delivered under insanitary conditions in the home, a total hysterectomy was performed and both vaginal and abdominal drainage was used. While the etiology of this rupture is obscure, it would appear to have been spontaneous, as the physician used only very slight force in turning the occiput anteriorly. C. D. HOLMES.

Samgin: Pregnancy and Labor Complicated by Ovarian Cysts (Zur Frage der Schwangerschaft und Geburtskomplikation durch Ovarialcystom mit Beschreibung eines Falles von ruptura spontanea cystomatis ovarii sub partu). *Med. Rundschau*, 1913, iv, 324.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb..

According to the statistics of the Berlin Gynecological Clinic, five cases of ovarian cysts occurred in 17,832 labors; according to the University Lying-In Hospital of St. Petersburg, two cysts in 10,893 labors. Fehling says these are caused by a displacement and flexion in the ovarian tubes and according to the writer, another cause is the frequent interruption of pregnancy by ovarian tumors. According to Kerron, rupture occurs in 4 per cent of cases of pregnancy; according to Williams, in 3.4 per cent of cases of pregnancy, and in 8 per cent of cases of labor. The causes of rupture are suppuration, axial rotation, pressure by the enlarging uterus, softening of the cyst wall, trauma, abortion, forceps, and at times the action of labor pains. The prognosis depends on the nature of the cyst contents, recovery being the rule where this is serous, and when it is not, peritonitis and death.

As to whether an operation should be performed during pregnancy or during labor, the author inclines toward the latter, as the danger of atonic secondary hæmorrhages is too great during the course of pregnancy. It is only then indicated if dense adhesions exist between tumor and uterus. If the pelvis is markedly contracted, the method of choice is the abdominal or vaginal radical operation. Paracentesis of the cyst and the induction of abortion might also be considered. Abdominal ovariectomy during pregnancy has a mortality of 12½ per cent, and causes an interruption of pregnancy in 16 to 22 per cent. The best results, according to Dsirne, are obtained during the third or fourth

months. The vaginal operation (Dührssen) has a slightly lower maternal mortality than the abdominal operation; however, the number of interrupted pregnancies and the sacrifice of children is much larger. It is indicated in small movable cysts without adhesions. A list of literary references is given.

KRINSKI.

Beck: Multiple Sclerosis, Pregnancy and Labor (Multiple Sklerose, Schwangerschaft und Geburt). *Deutsche Ztschr. f. Nervenheilk.*, 1913, xlv, 127.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Of the forty female multiple sclerosis patients treated in Tübingen, sixteen, or 40 per cent, attributed the onset of their disease to pregnancy and labor. In eight cases the disease commenced during pregnancy, in four immediately following the birth of the child, and in four independently of pregnancy and labor. In seven cases the disease became aggravated during pregnancy and in seven shortly after delivery. In one case the onset occurred during the first pregnancy, became aggravated in all five succeeding pregnancies, and always improved shortly after delivery. In a second case the sclerosis became so aggravated during pregnancy that therapeutic abortion was induced, followed by immediate improvement subjectively and objectively.

The interruption of pregnancy did not act as trauma in these cases, contrary to the view of Edinger; hence only the strain incident to labor can be taken into consideration as the exciting factor in the onset or in the course of the disease. On the contrary, it appears that pregnancy, considered by Offergeld as an exogenous etiological factor, probably is of much greater significance than labor and the puerperium. Practically, the prevention or interruption of pregnancy may be required in cases of multiple sclerosis, but definite rules at present must be formulated. HÖLDER.

Couvelaire: Surgical Treatment of Hæmorrhages Due to Separation of the Normally and Abnormally Situated Placentæ (Traitement chirurgical des hémorragies par décollement du placenta normalement et vicieusement inséré). *J. d. sages-femmes*, 1913, xli, 241.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author presents a résumé of the teachings and methods of the French school. Under surgical treatment the author understands hysterectomy and hysterotomy. In severe hæmorrhages due to low implantation of the placenta, the author prefers wide opening of the membranes, insertion of a Champetier bag or Braxton-Hicks version to surgical procedures. He gives statistics from numerous institutions of France. After subtracting the cases brought in in extremis, a 4 per cent maternal mortality is recorded. The principal danger is not hæmorrhage, but sepsis. The high foetal mortality is due to prematurity. In the cases which offer a hindrance to immediate delivery, as rigid cervix and infection, surgical treatment must be considered.

Hysterectomy is preferred in infected or suspicious cases; otherwise transperitoneal Cæsarean section. Vaginal and suprasymphyseal section are not employed.

With a normally implanted placenta severe hæmorrhages are rare. The author emphasizes the picture of utero-placental apoplexy. In these cases also he prefers the obstetrical methods of delivery if the os is soft and dilatable. Otherwise the surgical methods, as hysterectomy or transperitoneal section, are better, the former especially in cases of bloody infiltration of the uterine walls. Vaginal section is not recommended.

SCHIFFMANN.

McDonald and Krieger: Bilateral and Multiple Ectopic Pregnancy. *J. Am. M. Ass.*, 1913, lx, 1766.
By Surg., Gynec. & Obst.

Bilateral and multiple ectopic pregnancy are classified as follows:

Bilateral ectopic pregnancy: (1) Simultaneous; (2) different ages; (3) one ovarian, one tubal.

Twin tubal pregnancy: (1) Simultaneous; (2) different ages; (3) twins on one side and one foetus on the other.

It is difficult always to discover whether cases of double ectopic pregnancy are true twin pregnancies. Many cases which have been reported as twin pregnancies are cases in which one gestation has been retained in a tube and another has been deposited in the same tube. Also cases have been reported in which the first was retained as a lithopedion and a second tubal pregnancy occurred in the same tube. Several other combinations also have been seen and it is therefore difficult to state whether the foetuses in a twin tubal pregnancy are really twins and of the same age or whether it is only a repeated tubal pregnancy in which one conception has followed another in the same tube. Thirty-nine cases have been collected from the literature in which the evidence of twin tubal pregnancy was reasonably sure; that is, the foetuses were either the same size and character or were nourished by a single placenta, or the careful history gave no other record of more than one syncopal attack. The latter is not very accurate evidence but it is the best available. The authors then report two cases of their own.

In the first case the patient was 38 years old and had been suffering more or less for two months previous to operation. She had had several hæmorrhages but the last one was the most severe. On opening the abdomen large quantities of partly coagulated and fluid blood were found. The uterus, ovaries and blood clot filled the pelvis, and it was difficult to demonstrate the anatomical relations. The uterus was enlarged. The tumor masses on both sides and both ovaries were removed. Five days after the operation the uterus expelled en masse the remains of the placental tissue and foetus. One of the ovaries contained a corpus luteum. Both tubes were greatly enlarged and contained a brownish-red material. Connected with each tube was a foetus. One of them was well preserved while the

other seemed to have undergone an arrest of growth. In the one farthest advanced finger-nails, the external ear, eyes and face could be made out. In the other the lower limbs were well formed but the trunk and head was enclosed in a connective tissue capsule. The second patient was 28 years old. She did not suffer a great deal. She had had a continuous flow of brownish watery fluid since the last menstrual period. At operation the abdomen was found to contain only a small amount of free, blood-stained turbid fluid. The left tube was bound down by new-formed adhesions beneath the sigmoid. It was the seat of an ectopic pregnancy. The right ovary was macerated and lay behind the uterus and was bound down by adhesions in the pelvis. A second ectopic pregnancy with the foetus was found there. The anatomical diagnosis in this case was as follows: Double ectopic pregnancy. Chronic pelvic peritonitis. Decidual cells and chorionic villi shown by sections from the walls of the sac of each tube. Necrosis of the decidual tissue and thrombosis.

EDWARD L. CORNELL.

Muhsam: The Diagnosis and Treatment of Extra-Uterine Pregnancy and Report of Over 100 Continuous Operative Cures (Die Diagnose und Therapie der Extrauterine-gravidität, zugleich Mitteilungen über ein lückenlose Serie von über 100 operativen Heilungen). *Therap. d. Gegenw.*, 1913, liv, 199.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports 145 cases treated during the past five years. He discusses the etiology in regard to inflammation, age, number of pregnancies, and one child sterility. For differential diagnosis he advises puncture of the cul-de-sac in Fowler's position, the urobilin test and leucocyte counts. He employs also puncture of the cul-de-sac in cases of hæmatocele, and considers the danger of the procedure as insignificant. One hundred and eleven women were brought in in collapse, frequently under a mistaken diagnosis.

The treatment of extra-uterine pregnancy is absolutely operative, even in severe collapse. Muhsam operates by the laparotomy route, and employs the vaginal incision only in suppuration of the hæmatocele. The abdominal cavity is closed unless oozing of blood necessitates tamponade. The free blood in the abdomen is not removed during the laparotomy, but all patients are placed in the Fowler position and it is removed a few days later by vaginal incision or puncture. Among the 145 cases the author had a mortality of 9.5 per cent; in the last 108 cases, no death occurred. Nothing new is mentioned in regard to after-treatment; the remaining tube is not removed unless found diseased.

FRANKENSTEIN.

McCann: A Primary Ovarian Pregnancy at the Fourth Month. *Proc. Roy. Soc. Med.*, 1913, vi, Obst. & Gynec. Sect., 229. By Surg., Gynec. & Obst.

In order to prove that a pregnancy when advanced is ovarian it is necessary (1) that the

corresponding fallopian tube be intact; (2) that the ovary on the same side be absent; (3) that the foetal sac be connected with the uterus by the utero-ovarian ligament; (4) that ovarian tissue be discoverable in several portions of the sac wall. The macroscopical appearance and anatomical relations of this specimen seemed to indicate beyond doubt that this was a true ovarian pregnancy.

The patient was 32 years old and had one child 5½ years old. Her health was good. Menstruation was regular until Feb., 1910, when her periods ceased. Soon she began to have severe attacks of pain in the left lower abdomen. On May 29, 1912, she had a large cystic swelling in the left lower quadrant extending as high as the umbilicus. On June 7, the abdomen was opened. The tumor was found to be ovarian in character and connected with the uterus by the utero-ovarian ligament and to the broad ligament by the mesovarium. The left fallopian tube was quite free from the tumor and normal in appearance. The left side of the mass was cystic, while the foetus was in the upper part and to the right. Nothing abnormal was found in the right appendages.

The specimen proved to be a multilocular ovarian cyst consisting of two loculi. A septum separated these loculi from a third cavity which contained a foetus of about the fourth month with its placenta. The upper surface of the cavity was covered with a layer of recent blood-clot. The raw surface seen at the back of the specimen running between the loculi and the foetal sac represented the line of division of the entire tumor. The utero-ovarian ligament was directly connected with the foetal sac. The foetal sac consisted of an outer fibrous layer external to the amniotic lining, but where it was in apposition with the cystic portion of the tumor ovarian tissue was seen in the microscopical sections. The relationship of the pedicle to the tumor, and the fact that the utero-ovarian ligament was directly connected with the foetal sac, proved the specimen to be an undoubted example of ovarian pregnancy. A functionally active portion of the left ovary must have become impregnated, and the growing ovum evidently formed a sac for itself in this situation. The specimen further demonstrated the possibility that ovarian pregnancy may occur in an ovary already the seat of cystic tumor.

C. D. HOLMES.

Wilson: A Contribution to the Study of Eclampsia as a Toxæmia of Possible Mammary Origin. *Am. J. Obst., N. Y.*, 1913, lxvii, lxxx.

By Surg., Gynec. & Obst.

In this article Wilson carefully reviews the knowledge of parturient paresis of cattle and reports the cases of eclampsia in women that have had treatment directed to the breasts on the assumption that the breasts were the seat of the etiological toxine. He compares the points of similarity between the bovine and human diseases, and concludes his very interesting article as follows:

1. Parturient paresis is a disease of the parturient

cow, undoubtedly due to a powerful toxine in the blood having its origin in some perversion of the mammary secretion.

2. The mammary theory of eclampsia is based almost entirely on the pathological and clinical similarity of the two diseases.

3. There are, however, the following important differences:

a. Parturient paresis rarely attacks primiparous animals, while primiparity markedly predisposes to eclampsia.

b. Parturient paresis occurs almost entirely post-partum; eclampsia shows no especial predilection for this period.

c. Parturient paresis increases in frequency in direct ratio with increased power in milk production. No such finding has been noticed in eclampsia.

d. Sugar is an almost constant ingredient of the urine of parturient paresis but is rarely found in eclamptic urine.

4. The mammary theory of eclampsia is probably merely specious. At the same time, it deserves careful and thorough investigation and offers an attractive field for study. At least it may prove to be the explanation for the occurrence of a small proportion of cases.

5. Such an investigation should include:

a. A careful pathological and clinical study of parturient paresis.

b. The determination of the toxic or non-toxic character of the colostrum of eclamptics.

c. The tentative trial, in properly selected cases of eclampsia, of the treatment by air or oxygen injection of the breasts, which at least has the undoubted advantage of being harmless.

N. SPROAT HEANEY.

Engelmann and Elpers: The Viscosity of the Blood in Eclampsia and Other Diseases of the Female Organism (Über das Verhalten der Blutviscosität bei der Eklampsie sowie bei anderen Erkrankungen und Veränderungen des weiblichen Körpers). *Gynäk. Rundschau*, 1913, vii, 315.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The determination of the viscosity of the blood was carried out with the apparatus of Hess. According to Hess, the viscosity of the blood of healthy non-pregnant women is 4.22, and according to Oehlecker 4.38. In pregnancy Engelmann and Elpers found it to average 3.66 between the seventh and tenth months. It approaches the normal about ten days after labor. In eleven cases of eclampsia, in which no treatment had been instituted, the average was 5.0, a 40 per cent increase.

A venesection of 560 ccm. reduced it 17 per cent. The venesection was still more effective if followed by an infusion of 1-1.5 L. of Ringer's solution which causes a drop of 33 per cent. After infusion alone the viscosity decreased 25 per cent. The authors studied the viscosity also in other diseases. In severe hæmorrhages due to abortion, myomata and tubal pregnancy, the viscosity was decreased most decidedly

in prolonged hæmorrhage due to fibroids (2.6). The usual loss of blood during labor had no influence. In six cases of placenta prævia the viscosity was reduced to 3.73 only; the newborn child, however, showed an increase to 5.8. It is of value in the differential diagnosis of adnexal inflammation, an increase to 5.45 being observed in ten cases, whereas in ten cases of extra-uterine pregnancy it was always reduced to 3.73.

BISCHOFF.

Lichtenstein: Further Experience with the Expectant Treatment of Eclampsia (Weitere Erfahrungen mit der abwartenden Eklampsiebehandlung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author has again treated 94 cases by making a venesection and using Stroganoff's treatment. The maternal mortality was 5-5.3 per cent; the infant mortality 37.3 per cent in toto and 21.6 per cent of viable infants. Of the cases before labor 42 per cent were cured without interrupting the pregnancy. Seventy-four consecutive cases of eclampsia were cured without a death in 16 months.

If the cases are arranged according to the scheme of Fromme and Freund then the expectant treatment has a higher mortality than the active treatment; this merely signifies, however, that early treatment is better than late. It does not decide which treatment is the more feasible. The total number of deaths gives the best criterion as to the more desirable method to pursue. In the expectant treatment the death-rate is only $\frac{1}{2}$ to $\frac{1}{3}$, and 42 per cent of the cases are cured before delivery. In other words, there is no indication for active treatment in eclampsia and it is to be abandoned in preference to the expectant.

Kroemer: Disturbance of Kidney Function in Eclampsia (Störung der Nierenfunktion bei Eklampsie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kroemer reports on systematic examinations of urine in eclampsia with prodromal symptoms in pregnancy, labor and puerperium. Excluding the rare case without albumin, there is found, in addition to a large amount of albumin and casts, an oliguria with high specific gravity and a retention of chlorides. The latter is present in every case with œdema. The plotting of a curve makes the prognosis much easier, and offers reliable hints for the treatment. A sudden dropping of the curve shows a threatened eclampsia as well as a recurrence during the puerperium. By carefully watching this drop, Kroemer was able to combat the disturbances during the puerperium by means of venesection and the administration of larger quantities of water. The atypical cases without albumin and with normal NaCl excretion are the exception; they offer no prognosis and are adapted to the Stroganoff method of treatment. Functional tests of eclamptic kidneys with phenolsulphothalein confirmed the fact that

there was severe injury of the kidneys, since only 20 to 40 per cent of the urine substance was excreted; in first two hours up to 25 per cent. In healthy pregnant women the quantity runs from 60 to 75 per cent. This test may possibly make up the link in the determining functional activity of the kidneys. Investigations regarding the toxicity of the urine of eclamptics according to the methods of Franz and Esch resulted negatively. The liquor cerebrospinalis was absolutely non-toxic, the serum unreliable.

Nacke: The Treatment of Eclampsia (Eklampsie-therapie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Opinions differ widely in regard to the treatment of eclampsia. On the one hand is Freund, on the other, Lichtenstein. The author himself had seventy-nine cases of eclampsia, with a mortality rate of 3.8 per cent. His slogan is to deliver severe cases immediately, less severe cases as soon as possible. He considers those which secrete a small amount of urine, have prolonged drowsiness and a small rapid pulse, as severe. He attaches no prognostic importance to the quantity of albumin and to the number of convulsions. One case of severest eclampsia was delivered during the eighth month by means of vaginal Cæsarean section and recovered; the convulsions ceased and the anuria improved. Definite conclusions should not be drawn from such a case, however, as milder cases ended fatally. One point, however, he desires to emphasize in regard to operative delivery; namely, the uterus it liberated from the dangerous muscular tension and the reflex irritation it induces; the pressure is removed from the abdominal vessels, especially those of the kidney; the diaphragm is allowed to recede, lungs and heart are not impaired, etc. The delivery therefore accomplishes the removal of a great number of complicating conditions which alone may cause death, even without eclampsia. Nacke considers the operative treatment far superior to venesection.

Freund: The Treatment of Eclampsia (Zur Eklampsie-therapie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Between October, 1912, and April, 1913, 46 cases of eclampsia were treated expectantly (venesection and narcotics) at the Kgl. Charité in Leipzig. Four women died of eclampsia; four recovered during pregnancy. One severe case of eclampsia during the sixth month of pregnancy suddenly became worse during 48 hours of expectant treatment and the uterus was immediately evacuated by a vaginal cæsarean section. The foetal mortality has risen considerably by this method especially in eclampsia during pregnancy and early stages of labor. It was 41.9 per cent compared to 17.1 per cent in early delivery, excluding cases of puerperal eclampsia. Therefore it is still undecided which of

the palliative methods of treatment (expectant or premature delivery) is most favorable to mother and child.

In regard to other toxæmias of pregnancy, Freund reports 18 cases (16 cases of toxidermitis and 2 cases of hyperemesis gravidarum). The first 3 skin cases were cured by injections of serum from the pregnant woman; the following 4 were cured by horse-serum injections. To the other 9 and to the 2 cases of hyperemesis 200 cc. of Ringer's solution were given subcutaneously. All but 5 skin cases were cured; one of them was especially refractive. The remaining 4 had recurrences but 3 of them finally recovered spontaneously.

Ringer's solution is without doubt much slower in action than the serum, but it is advisable to employ one or two injections of it before resorting to the serum.

Vogt: The Obstetrical Significance of the Status Hypoplasticus (Die geburtshilfliche Bedeutung des Status hypoplasticus). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The most important and most frequent changes of hypoplasia, according to Bartel, are found in the lymphatic and the circulatory systems. The hypoplasia may involve either one of these alone, or only a part of one of them. The significance of this condition in obstetrics is shown by the report of three cases. The first concerns a primipara, 20 years old, in which a partial inversion of the uterus followed the expression of the placenta which already had become detached and was visible at the vulva. In spite of an immediate reposition and the moderate loss of blood, the patient died 3 hours later from cardiac failure. The post-mortem examination revealed an anæmia, normal genitals and adrenals with marked hypoplasia of the heart and entire circulatory system.

The second case was that of a very debilitated primipara, 40 years of age, in whom manual removal of the placenta was performed 4 hours and 15 minutes after labor. The patient soon died, although the loss of blood was slight. At post-mortem a general hypoplasia, a persistent thymus, a marked stenosis of the aorta and mal-development of the heart were found. In the third case, also a primipara, the pulse suddenly became poor after the delivery of the child by an extraperitoneal Cæsarean section. Artificial respiration and stimulation were unsuccessful. The amount of the anæsthetic used and the blood lost were small. Anæmia of all the organs and hypoplasia of the entire circulatory system was found post-mortem. Melchior attributes the death not only to a hypoplasia of the circulatory system with its tendency to parenchymatous hæmorrhages but also to a true oligæmia. Vogt verifies this opinion by the following clinical observations. The loss of blood from the operation in the second case was determined by Rübsamen's method and amounted to 390 cc. This quantity is slight.

In his case the loss of this relatively small amount of blood was sufficient to cause death in the presence of oligæmia, which latter is only a part symptom of a hypoplasia.

The following conclusions of importance to practical obstetrics can be deducted from these investigations: Hypoplastic individuals are very much endangered by labor. The conduct of the third stage requires particular attention, and, if possible, it should be expectant, but only as long as the general condition of the patient permits, because a relatively small loss of blood is sufficient to cause death. Surgical interferences are permissible only if based on the strictest indications, on account of the danger of the anæsthetic and the great tendency to parenchymatous and uncontrollable hæmorrhages. Even slight losses of blood may endanger life in primary oligæmia as shown above. The unexplainable cases of spontaneous inversion of the uterus in young primiparæ as observed by Mansfeld and Vogt find an anatomical explanation in a general hypoplasia and a debilitated constitution.

Kehrer: The Obstetrical and Gynecological Significance of Tetany (Die geburtshilflich-gynäkologische Bedeutung der Tetanie). *Arch. f. Gynäk.*, 1913, xcix; 372.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author discusses the reported cases of tetany during pregnancy, labor and the puerperium and then describes a number of observations; three cases of lactation tetany, two of tetany in mother and child, six cases of tetany in the new-born, two during pregnancy; one case due to oxalic acid poisoning and finally, eight cases following gynecological operations. He takes up first the clinical phenomena arising in conjunction with maternity, which shows an extraordinary variability. Especially interesting are his observations on tetany occurring during the first few days of infancy, as pediatric treatises do not recognize the disease before the second or third month. As far as the etiology is concerned, it is now positively known that the tetany of pregnancy as well as that due to lactation is identical with, and on the same basis as, that occurring after goiter extirpations — a deficiency of parathyroid secretion or hypoparathyroidism. An essential predisposition to a hyperfunction of the parathyroids is the lack of calcium in the body tissues and blood. Pregnancy and lactation especially predispose, therefore, to tetany, as during pregnancy the calcium of the maternal organism is required for the development of the foetal structures, especially the bones. During lactation the calcium is drained away in the milk and serves to nourish the child. The rational treatment consists in administering large doses of calcium. Adults receive five to six gm., the new-born 1 gm., per diem.

Food rich in calcium, as milk, yellow turnips, comfrey root (*radix consolidæ*) is advised. Narcotics cannot be dispensed with entirely. Venesection or other loss of blood is contra-indicated on account of

the loss of calcium incident thereto. The success obtained with the modern method of treatment of tetany does not necessitate the prevention of conception or the interruption of pregnancy. JAEGER.

LABOR AND ITS COMPLICATIONS

Terzaghi: Fever During Delivery; Obstetric Indications for Its Treatment (Febbre in travaglio; Criteri che guidano la condotta dell'ostetrico). *Arte ostetr.*, 1913, xxvii, 70.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports the case of a primipara in labor, normal in every respect except that her temperature was 39° C. and the child was presented by the breech. After a chill, delivery was effected by aid of the forceps and breech hook. The pulse varied from 96 to 100, and the fever disappeared a few hours after delivery.

The author considers the case one of fever due to intoxication. As a differential point between infection and intoxication, he places great stress upon the pulse. A temperature of 38° he considers physiological, on account of the uterine activity. Temperature before rupture of the membranes is rare. If it drops immediately after, the case is probably one of intoxication, otherwise it must be considered as an infection, especially if there has been operative interference under uncertain sepsis. Intoxication fever is indication of rupture of the membranes and spontaneous delivery, whereas in infection rapid delivery is indicated. Injuries are to be avoided as are also incision of the cervix and episiotomy. Version after the membranes have ruptured is contra-indicated on account of danger of rupture of the uterus; the author prefers perforation, even of the living child. High forceps is to be avoided. The infants die frequently, during the first few days, of umbilical infection or pneumonia.

SEMON.

Kusmin: Pelvic Outlet Tumors a Hindrance in Child-Birth (Über Beckenausgangstumoren als Geburtshindernis). *Med. Rundschau*, 1913, iv, 343.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In the two reported cases spontaneous delivery was impossible, due to a tumor in the birth-canal.

In the first case the diagnosis of carcinoma of the ovary was made. The tumor was located in the paravaginal tissue in the wall between the vagina and rectum. The clinical and microscopical examination showed it to be due to a congenital anomaly of the left Müllerian duct in its upper third. The ovary remained in its original position next to the lumbar vertebrae. The carcinoma most likely began here and after it had grown in size it slipped down into the pelvis. The tumor was removed per rectum and the child delivered with forceps.

Case 2 proved to be a submucous fibroid of the posterior lip of the os uteri. The tumor was removed per vaginam and this child also was delivered with forceps.

KRINSKI.

Ziegler: What Can Be Accomplished with the Method of Deventer-Müller for the Delivery of the Shoulders (Was leistet die Deventer-Müllerische Entwicklung des Schulter-gürtels)? *Beitr. z. Geburtsh. u. Gynäk.*, 1913, xviii, 271.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The advantages of the Deventer-Müller method for the delivery of the shoulders are simplicity and rapidity of execution, even for the inexperienced, and less danger of infection and injury to mother and child. The disadvantages consist in danger of severe injury to cervical spine, naturally caused only by carelessness or by forced application of the maneuver in severe dystocia. The greatest importance lies not in the application of the method for the delivery of the arms, but of the shoulders. If the arms are flexed they are delivered simultaneously with the shoulders. If they are extended the upper arms become so easily accessible that high traction on them will deliver them. Only when they lie in the nape of the neck may delivery by this method become very difficult or impossible. Von Herff considers the expression of the child by an assistant as essential to retain the flexed attitude of the arms and head.

The author is able to report 401 cases to date in which this method of delivery was used at the Basel clinic, with only 2.5 per cent of fractures as compared to 18 per cent in 225 cases delivered by the usual methods. Detailed statistics of maternal mortality and morbidity, as well as foetal mortality, cannot be given at the present time, but the figures all speak in favor of the Deventer-Müller method.

SCHMID.

Zangemeister: A Maneuver for the Correction of a Face Presentation (Handgriff zur Umwandlung der Gesichtslage). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author desires to present a new maneuver for the correction of a face presentation. It is based on former methods yet in its combination possesses something individual and, what is more important, serves its purpose in a much simpler and protective manner. It is as follows: The hand corresponding to the face (in mento laero anterior the left) is inserted upward alongside of the chin, the thumb is hooked into the mouth and the fingers are laid upon the thorax. The chin is pushed upward by the thumb and the tips of the four fingers force the chest toward the mother's back while the outer hand forces the buttocks toward the child's abdomen. It will be seen that with this maneuver the correction of the body position as well as the rotation of the head can be carried out with two hands, whereas another person is necessary to carry out the Thorn maneuver. In addition the hand is inserted into that side of the lower uterine segment which is stretched the least.

The author employed this maneuver in a series of cases. The correction was accomplished very easily.

That it is not always successful is due to conditions. As the occiput is considerably drawn out in primary face presentations and the position of the breech rather a stubborn one, there may be a recurrence of the face presentation after correction. In one case the correction failed on account of a foetal goiter and existing meningocele. But that was a case surely not adapted to correction. The author does not deem it advisable to try the maneuver in every case of face presentation, but under certain conditions he considers it a very valuable procedure for the benefit of mother and child.

Rizzacasa: Death Due to Rupture of Oesophageal Varices Occurring During Labor (Morte di una partorente per rottura di varici esofagee). *Giorn. internaz. d. sc. med.*, 1913, xxxv, 301.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient, a woman of 35, was admitted in the ninth month of her fourth pregnancy. She complained of burning in the throat and of parasthesias in the hands. She appeared dull and melancholy. A few days before delivery hæmorrhage of the gums occurred, and a few days later severe hæmatemesis. Two days later labor set in. The presentation was a face presentation with the child deeply asphyxiated; attempts at resuscitation resulted in failure. The woman suffered several more attacks of hæmatemesis and in spite of all treatment died shortly after delivery.

At the autopsy the hypophysis was found to be twice its normal size; the thyroid also was enlarged. The liver was contracted, weight 800 gms.; the spleen increased in volume and consistency. Numerous varicose dilatations were found in the venous plexus of the oesophagus. A large amount of black blood was found in the stomach and oesophagus. The direct cause of death was the hæmorrhage from the oesophageal varices.

BERBERICH.

Langes: Fatal Intraperitoneal Hæmorrhage During Labor Due to Rupture of the Uterine Veins (Intraperitoneale Verblutung intra partum infolge von Venenruptur des Uterus). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 537.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This is the report of a case of rupture of the uterine veins during labor in a bipara 32 years old. The labor began six weeks before term. Severe pains were suddenly felt in the abdomen about fifteen hours later with a sensation of an internal rupture. Seven hours after the attack a severe syncope with loss of blood took place. When medical assistance reached the patient, the abdomen was very tense and hard. The uterus could not be distinctly outlined. The foetus was not plainly palpable, but the foetal heart could be heard. The patient was pale and the pulse was 90. A foot was brought down to accelerate labor and the escaping amniotic fluid was free of blood. Symptoms of an internal hæmorrhage existed with dullness in the lower left abdominal region. An exploratory

puncture revealed the presence of clear blood. On immediately opening the abdominal cavity, a large amount of blood was found free in the peritoneal cavity. The blood was flowing in a thick stream from a perforation in the uterine serosa which was the size of a dime and located at about the level of the uterine os at the left lateral posterior border of the uterus. The child was dead. A supravaginal amputation of the uterus was performed. The patient died two hours afterwards.

Besides a severe anæmia of all the organs nothing else was found at autopsy. A sound introduced into the perforation of the uterine serosa entered an open blood vessel. Pathological changes could not be recognized in this defective area. Serial sections show a rupture of a large, thin-walled varicose vein closely situated underneath the serosa. The varicose enlargement plus the pressure caused by the labor must be considered as the etiological factor of the rupture.

Similar cases are reported in literature. A differential diagnosis must be made from rupture of the uterus, rupture of an extra-uterine pregnancy (combination of an intra-uterine with an extra-uterine pregnancy or gravidity in an accessory cornu), premature detachment of a normally inserted placenta, and rupture of blood vessels in the region of the spleen, or near the uterus. To enable one to recognize such cases the author recommends paracentesis with a fine cannula.

EISENBACH.

Reinhard: Medical Treatment for Weak Labor During Parturition (Zur medikamentösen Behandlung der Wehenschwäche während der Geburt). *Deutsche med. Wchnschr.*, 1913, xxxix, 747.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Experiments with coffeinum natrio-salicylicum having failed to increase labor, Reinhard used pituitrin, which had no effect in three cases and caused lasting contractions which endangered the life of the child in three others. Pituglandol gave good results in seventeen cases and failed in three; it caused tetanus uteri lasting fifteen minutes in two cases. Secale-dialysat-Golaz given in doses of 0.5 gm., and eventually given repeatedly, gave good results in twelve cases and none in two cases. It never caused tetanic contractions. The scarcity and weakness of labor is mainly influenced, not the duration.

MOHR.

Vogelsberger: The Galvanization Treatment of the Uterus According to Bayer in Conjunction with Pituitrin as a Means for the Artificial Induction of Premature Labor and Labor at Term (Über Galvanisationsbehandlung des Uterus nach Bayer in Verbindung mit Pituitrin, als Mittel zur künstlichen Einleitung rechtzeitiger und vorzeitiger Geburt). *Med. Klin.*, 1913, ix, 620.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author recommends galvanization of the uterus in combination with pituitrin for the artificial induction of premature labor. The procedure was carried out in 23 cases. Any transportable battery

is sufficient. A current of 10-20 MA. is necessary. A cathode, a sound-like electrode, is introduced high into the cervix. The anode is in the shape of a plate and is laid on the abdomen over the fundus and sides of the uterus and is moved until a contraction is produced. A few minutes' rest and the procedure is repeated. If no spontaneous contractions result in 20-30 minutes an interval of two hours is allowed to pass. If no spontaneous contractions set in during the first session we must conclude that no excitability exists on that day and repeat the treatment. No vaginal douche with antiseptics is given before galvanization as the mucous membrane offers protection against possible burns.

Pituitrin in conjunction with galvanization is not advised at the onset as a contraction of the cervix occurred in three cases, similar to its action without galvanization. Therefore, pituitrin should not be used until a cervical dilatation of at least three fingers is present. In abortions the cervix must be completely effaced. Then with 1 cm. of pituitrin the progress is hastened considerably. Four cases of miscarriage and six premature labors were treated. It failed in only two of the artificially induced abortions. The cause for the failure is the low excitability of the uterus in the middle months of pregnancy. As a rule only two to three sessions were necessary. In one instance twelve sessions were required. Powerful contractions set in spontaneously, increased by pituitrin until delivery occurred. In three cases pituitrin was not necessary at all. Labor lasted 12 to 48 hours; in one case 4½ days.

The indication in most cases was premature rupture of the membranes without contractions following. There are no disadvantages to the galvanization method. Its advantages over the older methods are: 1. It guarantees a normal labor; because the stimulation with galvanization is similar to the physiological stimulation; 2. There is less danger of infection than in intra-uterine manipulations or in blocking the secretions as in tamponade. WOLFF.

Kehrer: Subcutaneous Symphysiotomy of Frank
(Die subcutane Symphysiotomie von Frank). *Arch. f. Gynäk.*, 1913, xcix, 294.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kehrer reports in detail ten cases treated with the subcutaneous symphysiotomy of Frank and emphasizes the technique. As a result of the operation, the symphysis separates 2 to 3 cm. To prevent injury to the erectile tissue the author in the future intends to divide the ligamentum and the crura clitoridis with a double edged knife close to the bone for a distance of two cm. on both sides. The advantages over hebosteotomy are, above all, the prevention of injury to the bladder with resulting vesico-labial fistulae, urinary infiltration of the connective tissue, smaller symphyseal hæmatomata, prevention of callous formation with resulting contraction, permanent enlargement of the transverse diameter of the pelvis and firm cartilaginous union. The disadvantages are the transient œdemas of the

vulva extending from the hæmatoma, which may prolong convalescence indefinitely. To prevent their formation Kehrer advises early rising of the patient. All general contracted and flat rachitic pelvis (c. v., over 6.8 cm.) in anterior as well as posterior positions, oblique or transverse positions with prolapse of cord or extremity and brow presentations are the indications for this operation. The child must be at term and alive. Spontaneous expulsion is to be expected but pituitrin is administered when the pains are weak.

The operation is contra-indicated in infected cases and where infection is suspected. It encroaches upon the fields of the classical Cæsarean section, extraperitoneal section, high forceps, perforation of the living child, prophylactic version and premature labor. The last four operations mentioned are not to be considered for obvious reasons. The operation can be performed under ether, chloroform or sacral anæsthesia. The results in regard to the patient's ability to walk are excellent. The mortality in eighty-eight cases found in literature was zero for mother and child.

KLAUSS HOFFMANN.

PUERPERIUM AND ITS COMPLICATIONS

Jardine and Kennedy: Three Cases of Symmetrical Necrosis of the Cortex of the Kidneys. Associated with Puerperal Eclampsia and Suppression of Urine. *Lancet*, Lond., 1913, clxxxiv, 1291.
By Surg., Gynec. & Obst.

The authors give the clinical histories of their cases and describe the pathological findings. The first patient showed all the symptoms of eclampsia except convulsions. The second patient had only one convulsion. All these were delivered prematurely and in only one case was a live child born.

The kidneys, which appeared to have been healthy organs, were the seat of symmetrical necrosis of the cortex. The necrosis was more or less limited to the outer two thirds of the cortex, and in degree corresponded to the suppression of the urine. There was extensive thrombosis of the cortical blood-vessels which did not extend beyond the margin of the necrotic area and did not involve the vascular arches.

C. H. DAVIS.

Rübsamen: Clinical and Experimental Investigations Concerning the Action of Oxytoxic Substances During the Puerperium (Klinisch-experimentelle Untersuchungen über die Wirksamkeit der Wehenmittel in der Nachgeburtsperiode). *München. med. Wchnschr.*, 1913, lx, 627.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The type of the contractions of the uterus and the influence of oxytoxic substances upon its motor function can be studied very graphically during pregnancy and labor, but no such investigations have been carried out as yet during the puerperium. Rübsamen has been successful in devising a method for the determination of the motor function of the fresh puerperal uterus. According to him, the post-

partum movements of the uterus are in the form of contractions.

On the basis of his studies with glandutrin, pituitrin and pituitrin he concludes that the postpartum contractions are influenced powerfully by those substances, especially in atony of the organ. Contractions are obtained within four to six minutes following intramuscular injection and within ten to thirty seconds following intravenous injection; this also in those cases in which no contractions could be elicited by the usual methods. In six cases of severe atony, as well as in ten mild cases, the hæmorrhage was controlled with an intravenous injection of glandutrin alone. The author hopes that all intra-uterine manipulations will eventually be discarded in favor of the use of hypophyseal extract on account of the danger of infection. It is possible also under normal conditions to decrease the physiological placental hæmorrhage by giving an injection of extract of the hypophysis.

The author shows in a conclusive manner the value of the "prophylactic method" in six cases of placenta prævia and in fourteen cases of classical Cesarean section. In contradistinction to pituitrin, the action of secacornin occurs only after twenty or thirty minutes, and its maximum action is not attained until one and one half hours after administration. Similar or even inferior in action are other ergot preparations. Ergot increases only the intensity of the contractions; it does not shorten the pauses immediately as does pituitrin. Hæmorrhages occur during the interval and not during the contractions. The author's investigations, therefore, prove that secacornin alone does not influence atonic hæmorrhages.

SCHMID.

Huggins: Differential Diagnosis and Treatment of Puerperal Infection. *Penn. M. J.*, 1913, xvi, 695.
By Surg., Gynec. & Obst.

The author emphasizes the desirability of exactly locating the puerperal infection. If some intra-abdominal condition is strongly suspected, the author believes an exploratory incision should be made in order to palpate the ovarian veins, etc.

Treatment: The most important barrier against infection is a healthy patient; in other words, a woman should be under the care of a physician from the beginning of pregnancy. The author condemns the use of the curette and removes retained placental tissue only when the uterus is soft and baggy; this he does carefully with the finger. He drains local abscesses and peritonitis cases early, and keeps the patient in the sitting posture and out of doors all the time.

EUGENE CARY.

Schweitzer: Prophylaxis of Puerperal Infection (Zur Prophylaxe puerperaler Infektion). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In spite of all the precautions taken to prevent the occurrence of an external infection in the puerperal woman, there are, nevertheless, a fair number of

infectious cases for which an autogenous origin must be assumed. It occurs usually in those cases which during pregnancy had a pathological vaginal secretion. The author advises a prolonged douche treatment before labor in all women with such a secretion. Lactic acid is used in $\frac{1}{2}$ per cent solution. This inhibits the growth of cocci and most pathogenic bacteria. The cocci after daily douches are gradually replaced by the normal flora of the vagina. After a daily douche for ten days the pathological secretion gradually returned to normal in 90 per cent of the cases; 89 per cent of those harboring the streptococci became free of this organism. The bacilli which replace the pathological germs are acid-resisting and acid-producing organisms, which augment and continue the action of the lactic acid. Concentrated solutions of lactic acid and other antiseptics only injure the secreting portion of the vagina and are not beneficial.

Among 1,500 women who remained in the clinic some time before delivery there was a morbidity of 10 per cent; excluding those who had only a few douches (one douche daily for ten days being considered as necessary), the morbidity was 7.3 per cent; 7.1 per cent in cases with normal vaginal secretion; and 30-40 per cent in cases with pathological secretions. The author therefore attributes this reduction in morbidity to the beneficial action of the $\frac{1}{2}$ per cent lactic acid douches, and advises its use as a prophylactic in the latter days of pregnancy.

Stoddart: Puerperal Insanity. *Clinical J.*, 1913, xliii, 189.
By Surg., Gynec. & Obst.

In this article Stoddart discusses insanity occurring in the puerperium, but he believes that puerperal insanity is a misnomer. It is his belief that there is no complex of symptoms that would lead one to diagnose puerperal insanity if he did not know of the existence of a recent delivery. This kind of insanity usually occurs in persons predisposed to mental disorder, or may be caused by intoxication or infection, and he calls it "intoxication or infection psychosis" or "acute confusional insanity." Patients who usually develop mania or melancholia are troubled with the constitutional psychosis, and heredity plays a part in about seventy per cent.

In the treatment of septic cases serum therapy is used, but it seems to have little control over the mental condition. Breast feeding should be stopped and the milk dried up in all cases. Rest in bed, proper feeding, and narcotics for sleep are all necessary.

EUGENE CARY.

MISCELLANEOUS

Fromme: The Relations of Affections of the Heart to Pregnancy, Delivery, and Puerperium (Die Beziehungen der Erkrankungen des Herzens zu Schwangerschaft, Geburt und Wochenbett). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.
By Surg., Gynec. & Obst.

There is no proof for the teaching that the heart hypertrophies in normal pregnancy. The heart in

pregnancy appears lighter than normal because of the relative increase in body fat. An increase in the volume of blood in pregnancy has also lately been disproved. Blood pressure increases in the second half of pregnancy and can reach values above the limits of normal. In labor there occurs great variations in pressure independent of the individual labor phase. So the heart must be supposed to do increased work in pregnancy and labor.

Accidental murmurs occur in 10-15 per cent of cases in the latter half of pregnancy, due probably to the kinking of the pulmonary artery. Bradycardia occurs in 20 per cent of all post-partum cases. This is often combined with respiratory arrhythmia.

The functional ability of the heart is the only important prognostic point. Older ideas of danger from heart disease in pregnancy and labor must be abandoned. The combination occurs in from 1.5 per cent to 2.5 per cent of all cases. Among 200 such cases 3 died, or if the number of pregnancies be reckoned, 1 in 200. Older figures, e. g., 38.5 per cent mortality among heart disease cases, represent only decompensated cases. Seventy-five per cent to 80 per cent of all heart cases are free from every heart symptom in pregnancy. Among 100 such cases, 98 have no circulatory disturbances and atony is not more common than elsewhere. Only rarely does one find after normal pregnancy and labor disturbances of the heart in the puerperium.

Premature labor occurs in 5.9 per cent, abortion in 4.8 per cent of heart cases, more often than in normal.

Mitral stenosis is especially dangerous. Stenosis alone or in combination with insufficiency occurs in only 28.8 per cent of all mitral cases, but the death rate is 75 per cent of all mitral cases. Complications are common; thus, 16.6 per cent of all fatal cases were recurrent endocarditis, 29.4 per cent acute and chronic nephritis, pneumonia and lung tuberculosis in 6.8 per cent each, as well as emphysema, bronchitis, pleuritis, pericarditis, scoliosis, narrow aorta and obesity.

Primary or secondary myocardial degenerations are especially endangered by pregnancy. Obstetricians overestimate the dangers of labor in heart cases. No therapy except diet is necessary for heart cases having no symptoms in pregnancy. Cases of light decompensation should be first treated medically if primipara, or if multipara who have in previous labors had no decompensation. If this is not speedily effective, interruption of pregnancy should take place in any month of pregnancy. Interruption is also indicated in myocardial degeneration, high grade mitral stenosis, or in cases complicated by other diseases. Sterilization should be done at the same time, but never at other times simply because of heart diseases. Operative labor should be done only in presence of decompensation. Compression of the abdomen after birth is to be recommended. Marriage should be advised against only when decompensation has occurred.

Old primipara with heart lesions are especially

endangered, for, as Sellheim showed, accommodation after 40 years is very slight. Fromme agrees with Küstner that the after-life of heart cases is shortened. Aneurisms often rupture in labor. Sudden death in pregnancy occasionally occurs without any previous warning. Fromme lays great stress on rhythm, and warmly recommends MacKenzie's overnight atelectasis test. Medical treatment should never be tried too long; cases that do not respond quickly give high mortality.

J. R. MILLER.

Zoeppritz: Serum Diagnosis of Pregnancy (Serodiagnostik der Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After many vain attempts with Abderhalden's dialysis method, the technique has now been so mastered that the results in the last fifty cases at the Göttingen clinic were perfect, in spite of the fact that some of the cases were carcinoma, pus cases, etc. The error had been in the preparation of the placenta. The author advises aspirants to acquire the technique at Abderhalden's institute and to carefully follow every step as there prescribed.

Rübsamen: The Biological Diagnosis of Pregnancy by the Aid of the Optic and Dialysis Methods (Zur biologischen Diagnose der Schwangerschaft mittels der optischen Methode und des Dialysierverfahrens). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author made use of both of Abderhalden's methods in 100 cases. In anæmia and pus infections, one must use tubes containing 1 cc. of serum in making the dialysis test. In a case of pruritus during pregnancy, the dialysis reaction was more strongly positive before the successful serum therapy than later. In 10 cases of eclampsia the author got a weak reaction according to both methods. Three other cases reacted differently.

As a rule, the prognosis is favorable in proportion to the degree of splitting up of the eclamptic serum. In cases of hyperemesis gravidarum, the author got a weak reaction. Four cases that later proved to be ectopic pregnancies gave a positive reaction. In cases of endometritis post-abortum the optic method did not suffice and the dialysis reaction was weakly positive. Two cases of carcinoma and male blood gave negative reactions with the placental material. In every one of the 100 cases the author's results were ideal, and his observations check those of Abderhalden.

Lichtenstein: Abderhalden's Dyalitic Procedure (Über das Dialysierverfahren nach Abderhalden.) *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

The author examined 74 cases by the Abderhalden reaction, 40 pregnant, and 34 others. Only once did a non-pregnant woman give a positive test. Ascites, amniotic and spinal fluids gave negative tests. Eclamptic serum with eclamptic and normal

placenta give very strong reactions. One case gave a negative result, but the foetus had been dead for from three to four weeks, and the reaction does not last that long.

J. R. MILLER.

Schlimpert: Experimental Research in the Physiology of the Hypophysis (Experimentelle Untersuchungen zur Physiologie der Hypophyse). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Surg., Gynec. & Obst.

Examinations were made on the rabbit's ear according to Bissemski's method. In no month of pregnancy could an increase of hypophysin be demonstrated. Hypophysin is only found in the posterior lobe. Extracts of other parts of the brain developmentally connected with hypophysis gave no reaction. By the method employed, the hypophysis was demonstrated in bovine embryos as early as the tenth week; in man from the sixth month on. In such experiments the action of histamin, a product of putrefaction, must be excluded.

J. R. MILLER.

Basset: Clinical Experiences with Pituglandol (Klinische Erfahrungen mit Pituglandol). *Med. Klin.*, 1913, ix, 457.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In 20 cases, following the use of pituglandol, weak pains were strengthened and uterine contractions, which had ceased, began again. This took place three to ten minutes after injection, and its action lasted from two to two and one-half hours. Usually the length of labor was very short. The danger of tetanus is less with pituglandol than with pituitrin. Pituglandol can be given to primipara and multipara where there is little dilation of the cervix, and where the head is floating above the brim of the pelvis, if the soft parts are not too rigid and the relationship between the size of the head and the size of the pelvis is normal. Cumulative action and secondary weakening of uterine contraction do not occur. Intravenous injections are dangerous. They can not be depended on to bring about an abortion, but after uterine contractions have begun, and in an incomplete abortion, they give good results. In three cases of full-term pregnancy, labor and delivery followed injection of pituglandol.

WETZEL.

Zanfognini: Organotherapeutic Value of Adrenalin in Pregnancy (Organoterapia surrenomidollare in ostetricia). *Ann. di ostet. e ginec.*, Milano, 1913, xxxv, 247.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author cites fifty cases in which there were good results following the treatment of severe cases of vomiting of pregnancy with adrenalin. The results depend on the the quality of adrenalin used. The treatment is commenced with twenty to thirty drops of adrenalin hydrochloride a day, increasing the dose three to ten drops daily until improvement sets in. In very severe cases the dosage is increased to eighty or one hundred drops daily. When the symptoms are lessened and the condition is im-

proved, the dose is gradually decreased. The duration of the entire treatment is twenty to thirty days. There have been no complications or serious after-effects on uterus or foetus following this treatment, even in those very serious cases where four to five mg. of adrenalin were administered daily.

SEMON.

Ziemke: The Value of the Caput Succadaneum as a Sign of "Vital Reaction" (Die Bedeutung der Kopfgeschwulst als Zeichen der vitalen Reaktion). *Vierteljahrsschr. f. gerichtl. Med.*, 1913, xlv, Suppl. No. 1, 113.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author placed isolated leeches and between them Bier's pumps and periodically exerted powerful suction on the entire surface of the body of a dead foetus in order to determine whether the caput could be formed in a dead foetus. These areas were then examined macro- and microscopically, and resembled in every way the sections of the caput.

VOIGHT.

Koch: Modern Ecbolico, with Special Reference to B-Imidazolythämin (Kritische Betrachtung zur Frage unserer modernen Wehenmittel mit besonderer Berücksichtigung des B-Imidazolyäthylamins). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 564.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Koch finds betaimidazolyethylamin (histamin) much like pituitrin. On injection of $\frac{1}{4}$ -1 mg. into the portio, pronounced labor-pains soon developed. The hæmorrhage would stop but in the course of 10-24 hours the uterus would again become inert and the hæmorrhage so pronounced that a second injection would be necessary.

A rapid involution of the uterus was brought about during puerperium by giving 6 drops of a 1:500 solution of the drug three times daily. He treated thirty-three patients, twenty-five women having injections during labor (maximum dose 1 mg.). Secondary reactions were noticed in 70 per cent of the cases. These were headache, parched mouth, palpitation, etc. The inertia uteri recurred in three cases, in two of which the atony became very pronounced, but the author has had similar experiences with pituitrin. He had three cases of intra-partum death in pituitrin medication, two of which were due to the stormy contractions of the uterus.

WIENER.

Dessauer: Pelvic Measurement by Means of X-Rays (Beiträge zur röntgenologischen Beckenmessung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Dessauer and Kehrer describe an apparatus with which they are able to take measurements of any internal point or organs. They realized the inability to measure distances by one picture, even though all the different points are on the plate. They connected the focus of the tube and the two pictures taken, with two threads, which cross each

other. The picture is taken from two different points, and the exact distance can be read off by means of these threads. The pictures can be taken from any angle. The apparatus is adapted not only to taking pelvic measurement, but also for determining the size of organs or the distance of any two points within the body. It is simple in construction.

Perrando: The Significance of Meconium in Dissections of the New-born (Del meconio rispetto agli indizii che ne sono desumibili necroscopie del neonato). *Riforma med.*, 1913, xxix, 325.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The meconium is doubtless of great importance in forensic post-mortem autopsies. Its variety may allow conclusions as to the age of the foetus. In stillborn children more or less meconium is found in the liquor amnii. The colon may be absolutely empty, this being caused by direct pressure more often than by disease, by monstrosities and injuries of the central nervous system. With atresia of the intestines there is no meconium in the lower portions of the intestines; above the lower portions, it has a specific character and is of pathological importance for congenital atresia of the bowels.

Maceration does not cause any particular changes in the meconium and its elements can be differentiated up to the second and third stage. The meconium is quickly emptied, though not without exceptions, in foeti that died few days after parturition.

BERBERICH.

Franz: The Toxicity of the Urine During Pregnancy, Labor and Puerperium (Über die Giftigkeit des Harnes in Schwangerschaft, Geburt und Wochenbett). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

On the basis of numerous investigations the author concludes that the urine of healthy pregnant women is not more toxic than the urine of non-pregnant women; and that in many cases the urine is more toxic during labor than during the puerperium. During the puerperium it is slightly more toxic than during pregnancy. The urine is highly toxic in toxæmias of pregnancy, and especially in eclampsia. Esch and Zinsser have lately confirmed these findings, although Esch only occasionally noted a drop in temperature due to the toxicity of the urine, whereas the author observed it quite frequently. The urine in fatal cases of eclampsia is less toxic because of the retention of the toxic substances, the result of injury to the kidneys or to an incomplete metabolism in which the albumin products are not split up completely. To draw valuable conclusions from this work the urine of the individual case must be examined repeatedly during pregnancy to determine the relative toxicity of that urine, and so become aware of dangers when they arise. The clinical picture must always be considered, and especially the kidney function of the patient.

Fowler: Lower Arm Type of Obstetric (Brachial) Paralysis; Report of a Case. *Internat. J. Surg.*, 1913, xxvi, 196.

By Surg., Gynec. & Obst.

The case reported was that of a girl three years old who had a paralysis involving the fore-arm. The condition had been present since birth and had followed forcible traction on the arm by the midwife in attendance. The radial head was found dislocated. The hand was flexed at the wrist with slight ulnar deviation, the thumb was adducted and extended. There was hyperextension of the proximal phalanges; the distal phalanges were flexed upon the proximal. Diagnosis: musculo-spiral and ulnar paralysis.

The causes of this condition are several. The most common is tension on the nerve roots during delivery. It may occur in either breech or vertex cases. When the head is hyperextended the nerves are put on a stretch and traction may very easily overstretch them.

The treatment should be surgical and is necessarily a procedure of some magnitude. The general condition of the child should be carefully considered before attempting the operation. Operations which may be performed are: (1) Nerve implantation, (2) excision of damaged nerve tissue followed by suture, and (3) plastic operations for contracture deformities.

J. H. SKILES.

Hinselmann: The Origin of the Syncytial Lacunæ in Human Ova (Die Entstehung der Syncytiallakunen junger menschlicher Eier). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Human ova, early in the second month, were serially sectioned ($\frac{1}{2}$ to 3). The proliferating Langhans cells penetrate into the decidua basalis as anastomosing syncytial trabeculae. In this way the highly complex network of syncytial tissue arises. The maternal tissue in these projections dies off as a result of the choriolytic action and the refuse is carried away by the blood and lymph. Circumscribed parts of the syncytium may increase in the plasma and amitotic nuclear division may be present. The meshes are then no longer in one plane, but are surrounded by a delicate syncytial network, but develop into caverns that are surrounded more or less by syncytial membrane.

As soon as the human ovum becomes implanted, this syncytial system begins to develop. Then the tryptic cells of the mucosa function and the refuse of the maternal tissue is carried away by the blood and lymph streams; thus the whole organism becomes affected.

Gerstenberg: Remarks on Rotter's Method of Treating Contracted Pelvis (Bemerkungen zu Heinrich Rotters: "Verfahren zur Heilung enger Becken"). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 409.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The chiseling off of a piece of the promontory of a contracted pelvis to the extent of $1\frac{1}{2}$ to 2 cm.

according to the method of Rotter-Schmid is a rather serious procedure for static reasons. Gerstenberg found in skeletonized pelvis after operation an average increase of 2.88 and 2.72 cm. respectively for the sagittal measures of the lower surface of the fifth lumbar and the upper surface of the first sacral vertebra. During operations on fresh cadavers the author found continued and serious hæmorrhages from the first sacral vertebra. The anterior longitudinal ligament is especially broad in this region and a considerable portion is left behind on both sides after the operation. The procedure lengthens the true conjugate and also, in a certain sense, the transverse diameter. In the delivery the head is not pushed as far forward by the decreased promontory and, therefore, does not enter the pelvis through the more anteriorly situated smaller transverse diameter as under ordinary conditions, but through the larger transverse diameter. The shortest anterior posterior diameter now runs from the lower edge of the chiseled off portion of the promontory (middle of the first sacral vertebra) to the symphysis. If the former true conjugate was seven centimeters, then the new conjugate is still so small that a serious hindrance during labor is to be expected. Therefore, the operation should not be performed in pelvis with a conjugata vera of less than 8.5 cm. It is of advantage only in connection with induced premature labors.

WAGNER.

Kriwsky: Concerning Hebosteotomy (Zur Frage von der Hebosteomie). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 435.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After a minute discussion of the views of different authors on hebosteotomy, its behavior after the division of the pubis, the character of pelvic union, permanent widening and repetition of the procedure several times on the same person, the author presents his conclusions based on personal experience, on clinical observations and on literary data, adding two histories. 1. Hebosteotomy does not represent a cureall for contracted pelvis but takes a fixed place amongst obstetrical operations. 2. Within certain limits hebosteotomy is comparatively free of danger and the operation of choice in multipara with a slight degree of contracted pelvis. The conjugate vera should not be below 7. cm. 3. The experiences gained from case reports permit us to perform hebosteotomy also in primipara even in an emergency, if otherwise a perforation of the living child only could come in question and other methods of delivery as Cæsarean section cannot be employed. It is self-evident that in these cases the condition of the soft parts must be especially considered and that prophylactic measures, as Schuchardt's paravaginal accessory incision according to the proposition of Van de Velde, must be used.

4. The least dangerous method is Döderlein's. 5. Labor must be immediately terminated by a corresponding obstetrical operation after hebosteotomy. 6. The after-treatment does not demand any special appliances, an early lateral position is to be recommended. 7. Union of the separated bones takes place very soon, either a bony or a connective tissue cicatrix being formed. 8. A permanent widening of the pelvis by a lengthening of its diameter or by increase in elasticity frequently does not take place which represents a disadvantage of a hebosteotomy. 9. The mode of delivery necessary in subsequent labors remains undecided even if hebosteotomy had been performed several times in the same patient.

HÖHL.

Fraenkel: Investigations in Regard to the So-Called "Glande Endocrine Myometriale" (Untersuchungen über die sogenannte Glande endocrine myométriale). *Arch. f. Gynäk.*, 1913, xcix, 225.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author was able to corroborate the findings of Ancel and Bouin in regard to the presence of the "glande endocrine myométriale" (gland with an internal secretion in the myometrium). The author's investigations were conducted on the uteri of pregnant guinea pigs. The structure consists of nests or strandlike cell groups within the inner circular muscle layer of the uterus in the neighborhood of the placental site. These cells, 5 to 37 μ in length, vary in form, being spindle shaped, three cornered or polygonal, with granular protoplasm and no cell membrane. The round nuclei are mostly small (1 to 6 μ) and centrally located, without definite chromatic figures. These cells lie either singly in tissue clefts or lymph spaces, or in larger groups between muscle fasciculi. In the mucous membrane and in the outer longitudinal layer they are found only rarely. With the von Gieson stain they are sharply differentiated from the muscle fibres and connective tissue, the cells being dark brown with the nuclei dark blue.

They have been found between the twenty-first and twenty-sixth days of pregnancy only, and then not constantly. In regard to their histogenesis nothing definite can be stated. Morphologically they are different from the placental wandering and giant cells. Being confined to the placental area and the retro-placental muscular layer, as well as occasionally to the decidua, they have migrated from the placenta to the syncytial wandering cells. The vascular relation of these nests proves they are not of a glandular nature. In contradistinction to other glands with internal secretion, capillaries are found only in small numbers between the cells. The functional significance of these cells is, therefore, still in doubt.

SCHINDLER.

GENITO-URINARY SURGERY

KIDNEY AND URETER

Smith: Bilateral Nephrolithiasis. *N. Y. M. J.*, 1913, xcvi, 1282. By Surg., Gynec. & Obst.

The author states that he performed successfully seventeen bilateral nephrolithotomies in cases of bilateral nephrolithiasis, with the technique given below. The operations were performed under nitrous-oxide-oxygen-ether anæsthesia, either in sequence or the three merged to meet the immediate conditions. He placed the patients laterally, nearly prone on the table, and elevated the kidney area by a Cunningham's attachment. An incision is made in the lumbar region. The renal vessels were held by the fingers during the kidney incision and subsequent manipulations; drainage of the kidney was employed. The hemispheres were approximated by three ligatures carried around the kidney and tied, leaving no suture material in the kidney substance, following the advice of Moore. The author believes that it is often desirable to incise the kidney pelvis when the radiograph shows stone in the pelvis only, and the kidney is not otherwise diseased. There was no urinary fistula when the kidney was incised and drained.

Following operation the patients were given normal salt solution by proctoclysis. After a few hours the head and shoulders were elevated and the patients were given an abundance of water by mouth with urinary antiseptics. If anuria threatened the drains were removed temporarily; hot packs applied to the entire body and hot fomentations over the kidneys; and diuretin was given hypodermatically. The author thinks that the calculi are probably bilateral in from 20 to 50 per cent of cases, and if both kidneys harbor calculi, it is probably better to operate on both at one time, if the patient's condition, which must be determined during the course of operation, will warrant the additional operation. With the above mentioned methods, he is of the opinion that the mortality is encouragingly low, and the ultimate results, measured in life and function, are in the great majority of cases most satisfactory. J. RADDA.

Arcelin: Biliary Calculi Causing Errors in Renal Radiography (Les calculs biliaires causes d'erreur en radiographie rénale). *Lyon méd.*, 1913, cxx, 1129. By Journal de Chirurgie.

Cases are frequently met in which there are thought to be both urinary and biliary stones, when in reality only the biliary stones are present. Nearly every one believes that biliary stones give no shadow on the X-ray plate, so if by chance a biliary stone does show and the clinical symptoms are

such that there is some doubt concerning the diagnosis, and there is blood and albumin in the urine, a diagnosis of urinary calculus is made.

Shadows of biliary calculi resemble closely those of renal, and the differences are not clearly understood. Most radiographers and surgeons have never seen or have never correctly interpreted plates showing biliary calculi.

Arcelin has collected two cases in which radiographs of the urinary tract have disclosed biliary stones in patients having urinary symptoms. Arcelin had a case in which the plate showed the shadow of ten faceted calculi, polygonal in form, with more or less rounded edges, below the twelfth rib at the level of the first, second and third lumbar vertebræ. The periphery of the stone alone gave a shadow. The shadows corresponded to the location of the gall-bladder and a diagnosis of gall-stones was made. The patient was not operated upon.

Goullioud reported a case in which there were stones casting shadows similar to those described above, at the level of the twelfth rib. The appearance of the shadow was like that of the shadow cast by a uric acid stone. An operation for renal stone was advised on account of the predominating renal symptoms. Pyelography was not attempted. Nothing was found at operation; at autopsy a few days later one large stone was found in the common duct and sixty faceted stones in the gall-bladder, which did not show in the radiograph.

In order to make radiography more accurate, such causes of error must be recognized and studied further. J. DUMONT.

Isobe: Experiments on the Influence of an Injured Kidney upon the Other Kidney (Experimentelles über die Einwirkung einer lädierten Niere auf die Niere der anderen Seite). *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author occluded the blood vessels of one kidney in rabbits and dogs, extirpating the other kidney after a longer or shorter interval. The onset of total necrosis of the occluded kidney was followed by the resorption of decomposition products having a toxic effect on the other kidney, as shown by epithelial desquamation and more or less pronounced parenchymatous changes. This reaction persisted for one to two months when the necrotic kidney reduced to a small calcified mass produced no more toxic substances. If the urinary passages of only one kidney were occluded or the occlusion of the blood vessels was preceded by nephrotomy with implantation into the omentum, or decapsulation and enveloping with omentum, whereby a collateral cir-

culatation was established, there occurred in the other kidney nothing beyond a questionable hypertrophy. There was still some toxic substance produced if the renal substance became necrotic suddenly and in circumscribed areas.

In extending his studies to the liver, excising a part, enveloping it with omentum and implanting it in the abdominal cavity, the author found that when one kidney was extirpated the necrotic liver section produced only general toxic manifestations and no special alteration in the kidney itself. He concludes that the kidney gives rise to a specific, toxic substance, which acts on the kidney. **OEHLER.**

Kocher: The Operative Treatment of Floating Kidneys (Zur operativen Behandlung der Wander-niere). *Cor.-bl. f. schweiz. Ärzte*, 1913, xliii, 545.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author describes a new method of nephropexy which he employed in a recent case. It consists in removing a strip from the fascia lata 18-20 cm. wide and 4 cm. long and suturing the middle to the capsule of the lower pole of the kidney and anchoring the two ends to the fascia lumbocostalis and lumbodorsalis. This makes a fascial sac into which the kidney fits like a stone into a slingshot. **REINHARDT.**

Caulk: The Etiology of Kidney Cysts. *Ann. Surg.*, Phila., 1913, lvii, 840. By Surg., Gynec. & Obst.

The author prefaces his article by reporting a personal case of a renal cyst due to an obstructive calcareous papillitis. It occurred in a man, forty-six years old, who complained of a dull aching pain in the right side, beneath ribs, occasionally reflected along the course of the ureter into the scrotum, suprapubic soreness, low backache, pain in right hip, slight increased frequency of urination and hæmaturia. The prostate was moderately enlarged. Cystoscopy was negative while endoscopy revealed a large, dark-red, bleeding verumontanum with the whole posterior urethra congested. Owing to these findings the author thought symptoms were of prostatic and vesicular origin. Radiographs showed a shadow in the bony pelvis on right side, probably a ureteral calculus. At operation the right kidney was found enlarged at the lower pole. It was opened and a cyst discovered filling one of the pyramids. This was shelled out and the cavity cauterized. The kidney was closed with interrupted sutures, and the patient recovered.

Caulk states that the main theories as to the etiology of these cysts have been the retention theory, the new formation theory, the theory that colloid changes of the epithelial and connective tissue cells serve as an origin, the congenital theory and the theory of Krause, which is that the kidney cysts are sometimes secondary to atrophy of the renal lobes in early life, corresponding to an obliteration of one of the branches of the renal artery. The author believes that the prevalent idea that cysts even of medium size cannot originate through obstruction of inflammatory origin, is erroneous, as

in his own case there was a definite inflammatory obstruction and a fair sized cyst.

The true etiology is obscure in most cases. Serous cysts are infrequent. In 2,610 autopsies at Middlesex Hospital, Morris met with but five cases; Israel found but one case in 297 surgical affections of the kidney. That the malady is one of adult life has been shown by Simon, who collected 52 cases and found only seven of them under the age of twenty. We cannot associate renal cyst with any particular disease, though many have reported such diseases as pneumonia, typhoid fever, dysentery, gall-stones, gout, etc., as precursors. Pousson believes that diseases which produce nephritis may aid in the production of kidney cysts. Of the drugs and poisons, corrosive sublimate, phosphorus, glycerine, aloin, vinylamin, etc., have been thought to be of etiological moment. Petterson and Tollens have tried, experimentally, to produce cysts of the kidney but without success. Levaditi, working on mice, rabbits, guinea-pigs and goats, has been able to produce, by the subcutaneous injection of vinylamin, papillary necrosis and sclerosis.

Serous cysts may be single or multiple, generally unilateral, situated either in the cortex or medulla, and they vary in size from that of a walnut to that of a child's head. Rendu's case of renal cyst contained ten litres of fluid.

The symptoms referable to kidney cysts vary greatly. The small cysts usually pass unrecognized during life and are found post-mortem, while in large ones the symptoms depend upon size, location, pressure effects, presence of infection and hæmorrhage. Pain is present in but 60 per cent of cases and when present is usually localized. Hæmaturia is rare.

The diagnosis has seldom been made, even in cysts of large size. It has been confused with floating kidney (and it should be noted that the association of cysts with floating kidney has been observed in a number of instances), hydronephrosis, solid renal tumors, ovarian, splenic, hepatic, omental, pancreatic and mesenteric cysts, and ascites. Cystoscopy, ureter catheterization, functional tests, and X-ray have been of little service in differentiating the lesion.

For cysts of moderate size the most satisfactory operation, as utilized by Tuffier, Bardenheuer, Ricard, Recamier and Albarran, is excision of the cyst. Morris advises partial nephrectomy when the cyst is situated in one pole of the kidney. In very large cysts which have destroyed most of the kidney substance, complete nephrectomy is advised. The collected statistics of Quenu, Lejars, Albarran and Tuffier show 54 nephrectomies with 34 cures and 20 deaths.

H. W. E. WALTHER.

Berner: The Cystic Kidney; Studies Regarding Its Pathologic Anatomy (Die Cystenniere, Studien über ihre pathologische Anatomie). Kristiania: Eig. Verlag, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author by means of serial sections, graphic and plastic reconstruction, has studied in detail 28

cases of cystic kidney, 11 of which were congenital. The remaining 17 were those of adults up to 80 years old. He has found no points in favor of Virchow's papillitis theory and has never found any signs of inflammatory processes. The accumulations of small chromatin-rich cells which are found in the cortex as well as in the medulla, have been attributed to inflammatory processes by many observers. The author, however, believes that they are due to persisting nephrogenous tissue. The sudden formation of small epithelial cysts in this tissue speaks for that fact. The author considers them similar to normal "vésicules rénales" which are the anlage to the formation of Bowman's capsule and the excretory tubules. Furthermore all transitions from these little vesicles to cyst formations, the size and appearance of a Bowman capsule (in which no capillary tuft is present) can be seen.

The fact that polymorphonuclear cells have never been found and there has never been observed any diffuse connective tissue formation such as occurs in all inflammatory processes speaks against the inflammatory origin. The typical location of these masses of round cells also speak for its persisting nature; it is found occasionally along the periphery of the kidney so that one is reminded of the neogenous zone of the embryonal kidney.

In accordance with his own theory Berner was able also to demonstrate developmental disturbances which at one time involve one part, at another other areas of the urinary tract. The usual developmental error that could be demonstrated was the fact, that the two anlagen from which a normal kidney develops remain separated in the cystic kidney. This is proven most easily in the isolated Malpighian bodies from which blindly ending normal urinary tubules are occasionally seen to project. In a few of his cases collecting tubules were entirely absent. Even though in the literature the minute canals are frequently spoken of as collecting tubules the author calls attention to the surprising similarity between the normal collecting tubule and the atypical epithelial vesicle. He frequently observed collecting tubules with atypical branding and with a very irregular appearance.

In the pelvis of the kidney he was able also to demonstrate developmental anomalies, for instance, the occasional persistence of the single-layered flat epithelium — a typical arrest. At other times the pelvis showed atypical forms with large cystic cavities. The author discusses them in detail. In all his cases he was able to demonstrate developmental anomalies. In a fair number of them there were signs which must be attributed to tumor formation such as papillomatous excrescences, long connected epithelial bands, masses of free epithelial cells, epithelial vesicles floating within the cysts, many-layered epithelium and solid epithelial masses. Many such small compact masses are undoubtedly rests destined for the formation of a Bowman capsule. There is no doubt that epithelial proliferation occurs frequently in cystic kidneys. The question is

whether it is primary or secondary to the disease discussed. Secondary epithelial proliferation is frequently found following inflammatory conditions, but these are absent in cystic degeneration. In many cases the epithelial proliferation is clear and definitely of primary or tumor nature. The author holds to the view that cystic degeneration has nothing to do with retention, that each cyst is the result of a proliferation and in many cases may take on characteristics of an adenoma. In other cases these hyperplastic characteristics are absent and the picture is more that of a developmental anomaly. The developmental anomaly always precedes the epithelial proliferation. The cystic kidney in other words is a combination of a developmental anomaly plus a new growth. In individual cases one or the other factor may predominate.

All epithelial proliferation occurs in abnormal parts of the kidney. The author has never seen a normally functioning secreting tubule or a part of such which was the focus from which tumor-like proliferation originated. In regard to the occasionally occurring cartilaginous islands in cystic kidneys, the author's view coincides with that of Cohnheim and Wilms, i. e., that the structure is a mixed tumor and the cartilaginous islands are probably sclerotomal rests. He does not believe that they are due to a metaplasia. In the author's material there are quite a number of cases in which such cartilaginous islands occurred. The "horny pearls" which have been found only by Ruckert and the author are contained in cystic kidneys as well as in renal adenomas and are due to ectoblastic rests. The author also considers the presence of smooth muscle as belonging to the heterotypes, as he never found smooth muscle tissue in the stroma of the normal embryonal kidney. The presence of fat and mucoid tissue is explained on the same basis.

NILSEN.

Scheidemandel: The Infectious Diseases of the Kidney and Urinary Passages (Die infektiösen Erkrankungen der Nieren und Harnwege). *Abhandl. a. d. Ges. d. prakt. Med.*, 1913, xiii, 179.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author differentiates three types according to the manner of invasion by the infecting organism: 1. Hæmatogenous (descending) infection from bacteria which find their way in some manner into the blood stream. 2. Urogenous (ascending), arising from the lower urinary passages. 3. Infection via the lymphatics from the intestine. Infection from the blood stream is characterized by involvement of the parenchyma. The clinical picture in this condition, usually described as suppurative nephritis, is very variable. Urinalysis has demonstrated a direct bacterial invasion from such foci as the tonsils, middle ear and other local foci. Perinephritic abscess is produced by microbic invasion of the perirenal fatty tissues, the chief source of infection being furuncles of the skin.

The symptoms are high fever, sensitiveness of the kidney to pressure, severe constitutional depression.

With the accumulation of pus there is swelling and oedema in the lumbar region. In the early diagnosis positive urinary (bacteriological) findings are very significant. Invasion of the kidney alone is almost invariably hæmatogenous. When there is involvement of the renal pelvis one must consider, in addition to descending infections, ascending (*B. coli*) infection from the bladder and infection via the lymphatics. Against the preponderance of hæmatogenous invasion is the fact that, in the young, pyelitis is almost exclusively a disease of the female. A potent factor in promoting invasion by the motile *B. coli*, is a condition of urinary stasis. Infection through the lymphatics has its anatomical basis in the lymph passages reaching from the cæcum and ascending colon to the right kidney. According to Mueller's researches, it is possible for an invasion to occur via the lymph spaces in the walls of the bladder and ureter.

There are two significant points in the history, previous bladder irritability and nycturia. The sensitiveness of the involved kidney may vary. Muscular hyperalgesia and cutaneous hyperæsthesia are more constant. Mueller's method for recognizing pus in the urine is especially helpful. The reaction in *B. coli* infections is constantly acid. Hæmaturia in uncomplicated cases is extremely rare. The bacteriological diagnosis is important as the author found the causative organism to be the *B. coli* in 85 per cent of his cases. When possible ureteral catheterization is indicated to find whether one or both kidneys are involved. A bacteræmia is demonstrable in severe cases. The serodiagnosis in *B. coli* infections is unsatisfactory. The temperature curve is characteristic—chills and fever at first constant, with a deferescence in 5-6 days. A low pulse tension and undisturbed respirations differentiate this disease from pneumonia. The alternate fever and apyrexia is also characteristic.

Repeated relapses lead to bilateral involvement. Out of 125 cases but twelve occurred in the male. The preponderance of right-sided involvement is pronounced. A correlation between menstruation and pyelitis is noteworthy, 20 per cent of cases occurring in pregnant women. Pyelitis of pregnancy makes itself most felt in the second half. Here, too, in unilateral cases the uterus is in physiological dextroversion. Pyelography discloses generally dilatation of the ureter at its entrance into the true pelvis, or a dilatation of the renal pelvis. In the case of defloration, pyelitis resulting from the first attempt at coitus, there is at first involvement of the bladder and after a few days pains in the lumbar regions. The prognosis in an uncomplicated case of pyelitis is favorable. A chronic condition may persist for years without any extension of the process. Bacteruria is often the final stage.

The author inclines towards the medicinal treatment. Vaccine treatment is uncertain. In the more severe cases ureteral catheterization and pelvic lavage with silver nitrate is the procedure of choice. Lying on the left side is recommended for gravid

patients. While the interruption of pregnancy affords very prompt relief, it is not recommended. Operative procedures are reserved for complicated cases, such as perinephritic and nephritic abscesses.

P. MEYER.

Bauereisen: A Case of Post-Operative Perinephritis Serosa (Ein Fall von postoperativ entstandener Perinephritis serosa). *Ztschr. f. gynäk. Urol.*, Leipz., 1913, IV, 124.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In consequence of a Freund-Wertheim operation, an ascending infection took place which followed the lymphatics along the ureter to the renal capsule and gave rise to an inflammation of the tunica fibrosa and fatty capsule including the fascia renalis. The resulting inflammation the author describes as a perinephritis. A secondary invasion of the parenchyma gave rise to a nephritis. The operation of choice is an incision of the kidney. WEISSWANGE.

Baetzner: Contribution to the Study of Pyelitis Granulosa (Beitrag zur Kenntnis der Pyelitis granulosa). *Ztschr. f. urol. Chir.*, 1913, I, 285.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Baetzner reports a case of pyelitis granulosa which in its clinical manifestations differed from the clinical description of Fritsch in so far as there was no intermittent hæmorrhage. He ascribes this peculiarity to the special pathological findings at operation, to-wit, circumscribed knot-like infiltrations. In the etiology of pyelitis granulosa typhoid plays an important part.

REHN.

Drennen: Traumatic Hydronephrosis. *Ann. Surg.*, Phila., 1913, LVII, 879.

By Surg., Gynec. & Obst.

After distinguishing between three groups of traumatic hydronephrosis, i. e., (1) true traumatic hydronephrosis; (2) pseudotraumatic hydronephrosis; (3) ruptured hydronephrosis, according to Legueu, the author describes the true traumatic hydronephrosis and reports a case of the same.

As the origin of true traumatic hydronephrosis he gives the following etiological factors: Traumatic injuries to the ureter which complicate the renal injury and are invariably situated high up near the origin of the ureter, which may be either ruptured or contused or even completely severed and thus the cause of a cicatricial stenosis or occlusion at the point of injury. A blood-clot in the ureter following injury to the kidney, is another cause. This clot may cause obstruction and produce dilatation of the renal pelvis. The increased pressure above would necessarily distend the ureter so that the arrested urine would find its way alongside the clot, which, occasionally, would sooner or later become detached and washed away. There are also secondary causes such as traumatism, which may lead to floating kidney and this in turn to obstruction of the ureter. A blow over a calculous kidney may dislodge a small stone, which may be impacted in the ureter and thus form a true traumatic hydronephrosis.

Symptoms of true traumatic hydronephrosis, as he states, simulate mostly congenital cystic kidney. In most of the cases hæmaturia is present. The size of the hydronephrotic sac varies according to the nature of the ureteral obstruction, which, when sudden and complete, may produce a small tumor.

The author bases the diagnosis of true traumatic hydronephrosis on the preceding traumatic history and clinical symptoms, such as a fluctuating tumor, retroperitoneal in position, originating in the kidney and developing insidiously, its contents consisting of more or less altered urine.

The differential diagnosis is based on the conditions in which a renal tumor is found; viz., hæmatonephrosis, pyonephrosis, pseudotraumatic and ruptured hydronephroses. According to him, a correct diagnosis is made at operation or autopsy, when the following features are found: The expanded pelvis, the swelling being a true tumor of the pelvis of the kidney; the dilated calices; the flattened papillæ of kidney tissue and the obstruction in the ureter. Also the X-ray may be employed in the correct diagnosis of true traumatic hydronephrosis. A case is reported in detail. J. RADDÄ.

Aleman: A Case of Right-Sided Intermittent Hydronephrosis Caused by Two Accessory Renal Arteries; Operative Removal of Same; Recovery (Ein Fall von rechtseitiger, intermittierender Hydronephrose, hervorgerufen durch zwei Arteriæ renales accessoriæ; Operation mit exstirpation dieser Gefässe; Genesung). *Nord. med. Ark.*, 1912, xlv, No. 10.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports a case of intermittent hydronephrosis in which two accessory renal arteries were found to be the cause. After operative removal of these abnormal vessels the patient made a full recovery.

HOHMEIER.

Tennant: The Cause of Pain in Pyelography with Report of Accident and Experimental Findings. *Ann. Surg.*, Phila., 1913, lvii, 888.

By Surg., Gynec. & Obst.

Tennant issues a warning relative to the damage which may result to the kidney parenchyma by injection of solutions without accurate control of pressure in pyelography for diagnostic purposes and gives details of one clinical case and of several animal experiments.

In the usual method of injecting collargol through a large-sized ureteral catheter with a piston syringe unconnected with gauge or pressure index the determination of pelvic capacity is left wholly to the symptom of renal colic expressed by the patient. Damage to the kidney may result before the patient complains of colic irrespective of whether water or a preparation of silver has been injected.

The accurate determination of both the quantity of fluid and the pressure can be determined by attaching mercurial blood-pressure manometer to one end of a Y tube while the fluid is discharged

under pressure from a graduated glass cylinder. The recently published method of Thomas for distention of the renal pelvis is a simpler and more practical method where gravity is sufficient.

A female, aged 24 years, presenting symptoms suggestive of chronic appendicitis was found to have complete transposition of viscera and the renal pelvis were injected by means of a piston syringe, with a 15 per cent collargol suspension for diagnostic purposes. The right pelvis received 20 cc. and the left 16 cc. Considerable pain followed but the skiagrams were unsatisfactory. Five weeks later injection of 12 cc. on right and 10 cc. on left of a 25 per cent suspension.

Skiagram showed normal left pelvis and large irregular right pelvis with marked shadow well out in parenchyma extending from center of the right kidney, infiltrating into its upper pole. This shadow was supposed to be a diseased area and exploratory operation was undertaken two weeks later. A large wedge-shaped area of kidney substance about two inches wide was found to be infiltrated with the collargol and the capsule covering this infarct was lifted from the parenchyma by a layer of collargol. The infarct extended to the renal pelvis but was excised without opening into latter. Patient recovered with relief of symptoms.

On microscopic examination, the tubules were found to contain collargol throughout their entire length and extending into the glomeruli. Collargol from both injections was probably present. The tubular epithelium generally was completely necrotic.

In a series of experiments on freshly removed hogs' kidneys it was found that a similar extension of the collargol into the tubules occurred at a pressure varying from 40 mm. to 8 mm. mercury and upward.

J. B. CARNETT.

Warischtschew: Decapsulation of the Kidney (Zur Frage der Nierendekapsulation). *Chir. Arch. Weljaminsowa*, 1913, xxix, 250.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The patient was a woman 37 years of age with chronic nephritis, œdema, albumin 1.3 per cent, hyaline and granular casts. First the right kidney was decapsulated. No improvement followed. After 11 months the left kidney was decapsulated. After temporary improvement there was a relapse and 2 years and 7 months after the second operation the patient died.

Contrary to other authors, the writer found in place of the removed capsule a thick, firm, fibrous tissue capsule that produced a complete pressure atrophy of that part of kidney. There was no anastomosis with the renal vessels. The kidney picture was that of secondary contraction. The author concludes from this case that nothing is to be gained by decapsulation in uncomplicated cases of nephritis. The procedure, according to Parlauecchio and Flörken, is indicated only in exacerbations of nephritis, in uræmia and in anuria. Eclamps-

sia is a special indication for decapsulation, but a secondary contraction due to the formation of a fibrous tissue capsule may occur in any of these cases. The author's experience corresponds to the experiments of Rosoff, who also found sclerotic changes in the newly formed vessels. The author agrees with Israel in considering decapsulation an unfavorable procedure.

HESSE.

Moore and Corbett: An Experimental Study of Several Methods of Suturing the Kidney.
Ann. Surg., Phila., 1913, lvii, 860.

By Surg., Gynec. & Obst.

The authors point out that the damage resulting from suture of the kidneys is much more extensive than from the incision and is, moreover, very variable, ranging from slight scar tissue formation to complete destruction of the parenchyma. Where mattress sutures are used, small portions of the kidney substance may be strangulated, especially in the pyramids. Later calcification with the formation of a calcium phosphate stone may occur. This was produced experimentally, the stone forming in three months.

After reviewing the anatomy of the blood supply, the authors consider the question of methods of incising the kidney, and state their objections to the silver-wire method of Cullen. They give the results of a series of experiments on animals in which the knife and wire were used: the authors found the wire produced as great if not greater areas of infarction and more damage to the collecting tubules which at times do not run parallel to the vessels in the parenchyma. They found that if Carrel soft-jawed forceps were applied to the renal vessels to control immediate bleeding, and the kidney opened with a sharp knife, avoiding the poles, the least damage was done. After the necessary exploration the parenchyma is approximated by "through and through" sutures of very fine silk.

Kidneys sutured by them in this way do not bleed and they show by a considerable number of experiments that the temporary compression of the renal vessels produces slight desquamative or fatty changes only. Kidneys examined a few weeks after simple clamping of the vessels were normal. Further experiments showed that the clamping of renal vessels for one hour had no serious effect on renal function. Their conclusions are that, while mattress sutures of any material cause extensive destruction of kidney substance, "through and through" sutures with fine silk produce but slight lesions.

HORACE BINNEY

Läwen: Concerning Bilateral Ureterolithotomy in Calculous Anuria (Über doppelseitige Ureterolithotomie bei calculöser Anurie). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 411.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Most writers assign very minor importance to ureterolithotomy in calculous anuria as compared with operation (nephrotomy) on the affected kidney.

They concede this procedure permissible only under special conditions. They hold removal of a stone a secondary matter. Double sided ureterolithotomy is even more seldom carried out. In conjunction with a case in which this procedure was successfully performed the author discusses the indications and prognosis of this operation. It is indicated in impacted stone in the iliac or pelvic portion of the ureter, but adaptable only if the pelvis is otherwise free from stone. In cases of unprotracted anuria it is best to attempt to dislodge the stone first by ureteral dilatation or injection of an indifferent fluid. In event of a severe anuria it is necessary to perform a single or double nephrotomy for it favors the re-establishment of the renal function as does an intestinal fistula in ileus. The proportion of cases in which bilateral ureterolithotomy is indicated is very small but its range of usefulness will broaden.

OEHLEK.

Hartmann: Operative Treatment of Supernumerary Aberrant Ureters (Zur Kasuistik und operativen Behandlung überzähliger aberranter Ureteren). *Ztschr. f. Urol.*, 1913, vii, 429.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A thirty-three year old female patient had been consulting several physicians for nocturnal enuresis without getting relief, when Hartmann discovered a small opening below the orificium externum urethrae from which a little drop of urine was passing when the patient coughed. Further examination revealed the opening as the outlet of a supernumerary aberrant ureter. By the vaginal route this ureter was then implanted into the bladder and the patient was relieved of her trouble.

The author collected fifteen cases of supernumerary aberrant ureters from literature; there were twelve other cases in which it was not possible to decide whether they dealt with supernumerary aberrant, or with perfect, ureters, and finally seven cases of perfect ureters with abnormal outlet. It is often extremely difficult to find the narrow opening. Sounding is almost always impossible. As operative methods, implantation of the ureter into the bladder or into the urethra may be considered; for implantation into the bladder the vaginal, the transvesical or abdominal route may be chosen. The vaginal implantation into the bladder is the method of choice.

RUBRITUS.

Hutchinson: Obstruction of the Ureter by Aberrant Renal Vessels; a Clinical Study of the Symptoms and Results of Operation.
Proc. Roy. Soc. Med., 1913, vi, Surg. Sect., 201.

By Surg., Gynec. & Obst.

To insure an early diagnosis of vascular obstruction of the ureter, Hutchinson notes the following signs: It is found generally in males, usually between the age of 15 and 25, rarely younger. The attacks of pain are periodical with an interval of months or years between the early ones, while the later ones come on every week, or oftener. Finally,

when the pelvis dilates permanently, the attacks cease, only a dull pain in the loins remaining. The pains are severe, doubling the patient up and making him sweat profusely. Vomiting is frequent, although it does not always occur. The pains are located chiefly in the lumbar region, but may occur in the front of the abdomen, and radiate toward the groin and testes of the same side, rarely into the shoulder. It is one-sided, occurring on the right side twice as frequently as on the left. Relief is obtained by lying on the affected side. Neither medicines nor aperients are of use.

Exertion does not cause the pain as a rule. It may come when patient lies down; it is not affected by diet, time of meals, nor constipation.

There are no objective signs. Cystoscopy may show congestion of the ureteric orifice on the affected side. A skiagram will make the diagnosis.

Urinary symptoms are absent; there is no frequency of micturition during or after an attack. Occasionally hæmaturia, traces of albumin and pus are present. The cause is congenital. It is not dependent upon a floating or a too mobile kidney.

In the majority of cases lumbar exploration alone is required. The vessel or vessels at fault are ligatured and excised. A plastic operation has been performed in cases with distortion of the pelvis but without success. The author claims it is best not to open the canal but to straighten out the pelvis and ureter as far as possible. He advises early operation.

LOUIS GROSS.

Ottow: Contribution to the Study of Intermittent Ureterocele Vesicalis (Beitrag zur Kenntnis der intermittierenden Ureterocele vesicalis). *Ztschr. f. gynäk. Urol.*, Leipzig., 1913, iv, 103.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author describes a case of unilateral ureteral prolapse the size of which varied with the strength of the urinary stream. It was plainly at its greatest size during action of the ureter, and diminished in the intervals. This observation made it clear to the author that the action of the ureter is the explanation of the well-known variability in size and appearance of such a ureterocele.

HOLZBACH.

Lohnstein: Cystic Dilatation of the Vesical End of the Ureter (Cystische Erweiterung des vesikalen Ureterendes). *Ztschr. f. Urol.*, 1913, vii, 517.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author describes a case of ureterocele successfully operated by him three years ago by the endovesical route. The patient was a woman, 29 years old, who had suffered for many years severe pains in the lower abdomen. She had had an appendectomy, a double ovariectomy and a vaginofixation performed without relief. At the present time she complained of acute bladder catarrh. Cystoscopic examination showed the bladder wall bulged inward by the ureterocele; the mucosa surrounding the ureteral opening was prolapsed. Diagnosis: right-sided ureterocele. At operation the prolapsed

mucosa was cauterized with a Loewenhardt cautery introduced through a cystoscope. The ureteral opening immediately enlarged; bulging of the bladder mucosa disappeared. The patient's symptoms entirely ceased. The author in operations of this kind prefers the endovesical route.

OEHLEK.

Zuckerkancl: The Local Treatment of Retention of Urine and Pus in the Kidney by Means of Ureteral Catheterization (Über die örtliche Behandlung renaler Harn- und Eiterstauungen durch Harnleiter-katheterismus). *Wien. med. Wchnschr.*, 1913, xxii, 1345.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Normally there is no urine in the renal pelvis. Residual urine in the kidney pelvis must be looked upon as a pathological condition. Complete or partial retention, whether aseptic or infected, can be therapeutically influenced by the introduction of ureteral catheters even though in many cases it may be only a palliative measure. Where the urinary retention in the kidney is complete, the severe symptoms of the attack, as seen in intermittent hydronephrosis, can usually be relieved quickly by evacuation of the urine by means of the ureteral catheters. The duration of the disease cannot be limited by the catheterization since in cases of complete retention in the renal pelvis pressure atrophy of the kidney tissue appears after a short time.

The therapeutic benefits of ureteral catheterization are more marked in cases of chronic incomplete retention, and especially in the infected forms. Besides catheterization, lavage of the renal pelvis may have to be considered. On account of hæmorrhage, pain, etc., the catheters cannot be retained indefinitely, usually not longer than 24 hours. Each case must be examined with due regard for all the symptoms, and the anatomical and pathological relations accurately determined by all the modern methods. In all cases of disease of the perirenal or renal tissue, and in those with marked constitutional disturbances immediate operation is indicated. OEHLECKER.

Pakowski: Permanent or Temporary Derivation of the Urine by Means of Nephrostomy (La néphrostomie moyen de dérivation permanente ou temporaire des urines totales). *Thèse de doct.*, Par., 1913, June.

By Journal de Chirurgie.

The indications for urinary derivation are multiple; such as, severe tuberculous cystitis, painful and inveterate cystitis, bladder tumors, exstrophy of the bladder, pelvic cancer pressing on the ureters, obstinate vesico-vaginal fistulæ; and some cases of renal lithiasis. The incision must be short, so as not to require many stitches to repair it; the fistula must be made on the lower calyx; and the drain must be well secured in correct position. When the derivation is intended to be permanent the best way to occlude the ureter is to pleat it, accordion fashion, by means of a stout catgut. Around each suture thread and on each lip of the incision, a zone of necrosis $\frac{1}{5}$ to $\frac{1}{3}$ of an inch thick is produced. This

is far from the necrosis of $\frac{1}{3}$ or even $\frac{1}{2}$ of the parenchyma wrongly maintained by some authors.

Far from impairing kidney function, fistulization improves it, as demonstrated conclusively by many cases. In some instances the improvement is such that radical surgical interference may come up for consideration later. If, besides, we take into account the fact that there exist a number of perfectly tight appliances to collect the urine, we must admit that nephrostomy deserves a greater place in practical work than it has been heretofore granted.

GASTON PICOT.

Kidd: A Small Muscle-Splitting Incision for the Exposure of the Pelvic Portion of the Ureter.

Lancet, Lond., 1913, clxxxiv, 1578.

By Surg., Gynec. & Obst.

The author bases this report on his experience in the dissecting room, and on a series of operations on the living. He advocates an incision three inches in length parallel to Poupart's ligament and one and one half inches above it, the center of the incision being directly over the internal abdominal ring. The various layers of muscles are divided in the direction of their fibers; more room is secured by the inward retraction of the rectus muscle, great care being used not to cut its posterior sheath. The ureter is to be exposed at the point where it crosses the external iliac artery. The author claims the following three advantages for the incision: that it avoids injury to the last dorsal and ilio-hypogastric nerves and to the deep epigastric vessels, and prevents the occurrence of post-operative hernia.

HENRY L. SANFORD.

BLADDER, URETHRA, AND PENIS

Lewis: Where is the Fundus of the Bladder? J.

Am. M. Ass., 1913, lx, 1765.

By Surg., Gynec. & Obst.

In an appealing communication, Lewis asks that the term fundus of the bladder, which in truth has origin from the Latin, in meaning the base, be corrected. It is a misnomer, inasmuch as the term as applied has reference to the vertex. He asks that the nomenclature be changed, according to the true anatomy of the part and the classification as given by the anatomists, as follows: (1) The summit or vertex; (2) the base or fundus; (3) the body; (4) the cervix or neck.

IRWIN S. KOLL.

Unterberg: The Operative Treatment of Rebellious Cystitis Cases with Curettement of the Bladder and Temporary Urinary Fistula

(Die operative Heilung der rebellischen Cystitiden mittelst Blasencurettag und zeitweiliger Blasen fistel). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 251.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author defines as rebellious, cases of chronic cystitis in which deeper pathological changes prevent or interfere with the return of the organ to normal. He divides the disease into two types, one

in which definite anatomical changes of the mucous membrane exist, such as ulcerous cystitis, leucoplacia, cystitis pseudomembranosa; and the other without characteristic mucous membrane changes. The etiological factors are gonorrhœa, pregnancy and catheterization. Anatomically the severe bladder lesion consists of a thickening and induration of the individual layers, which decrease the mobility and dilatability of the organ and convert it into one of fixed capacity. As the most severe changes occur in the submucous layer, curettement of the focus is necessary.

According to the author the entire removal of the mucous membrane through a suprapubic opening, with prolonged drainage and irrigations with 1-3 per cent silver nitrate solution, is the most thorough method. If the patient is a woman and refuses a suprapubic operation the treatment may be performed through the urethra. In very severe muscle degeneration with minimal capacity, the only treatment consists in performing a permanent, easily closing urinary fistula to liberate them from the continuous desire to urinate. He reports seven cases of personal observation and treatment (six women and one man). Of the three cases in which the bladder curettage was performed through the urethra, two were improved, and one had a recurrence after a short improvement. Two cases of suprapubic curettement with temporary fistula were decidedly improved. Two cases with suprapubic curettement and permanent fistula were not improved on account of the extensive destruction of the bladder musculature. The best results are obtained *sectio alta* and curettement. Local treatment produces no results in rebellious cystitis.

DORN.

Lerda: Contribution to the Treatment of Exstrophy of the Bladder

(Contribution au traitement de l'exstrophie de la vessie). *J. de chir.*, 1913, x, 549.

By Surg., Gynec. & Obst.

The author groups the various methods of treatment of exstrophy of the bladder as follows:

1. Interventions having in view the reconstruction of the bladder and urethra.
2. Interventions upon the ureters to avoid the inconveniences caused by the mucosa of the exstrophied bladder and to limit the escape of urine.
3. Interventions having in view the deflection of the urine into the intestine.

4. Interventions having in view the creation of a vesical pouch possessing an orifice to the exterior, placed under control of the sphincter ani, and without any connection with the rectum.

After a brief review of the technique involved in these methods of treatment with their advantages and dangers, Lerda evolved a principle which resolved itself into two steps:

1. To obtain a closed vesical pouch, no matter how small, use entirely or in part the exstrophied wall since this wall is most apt to fulfill bladder function.

2. To create to this cavity a vesico-perineal canal for the escape of urine, independent of the intestine but passing within the ring of the sphincter ani.

This principle was applied in the following case: A boy, aged six and one half years, with exstrophy of the bladder with epispadias, had been operated upon a year previously. The operator had succeeded in creating a small vesical cavity with a hypogastric orifice. This orifice was on the pubic eminence, had scar tissue margins, was circular and admitted one finger. The epispadic penis was likewise scarred, due to an unsuccessful attempt to construct a urethra. Scrotum empty, undescended testicles in the inguinal canal.

The operative procedure was as follows: 1st step. In the perineo-scrotal region a longitudinal skin flap, 8 cm. long by 4 cm. wide, was dissected up with a thick base at the anal orifice. The sphincter ani was next carefully exposed and separated from the anterior wall of the rectum. A large Hegar dilator was introduced into the rectum in order to displace it forward and upward and force the small intestines out of the pouch of Douglas. Then with one finger in the bladder a blunt director was forced into the tissues between the sphincter ani and the rectum into the cellular pelvic tissue and a retro-prostatic canal made to the base of the bladder. Next, the end of the skin flap was grasped in a curved forcep and introduced as a posterior and lateral lining for the canal. As yet the bladder was not opened. In order to epithelialize the rest of the canal, one large Thiersch graft was wrapped around an ordinary T glass fenestrated drainage tube. The graft was punctured over the fenestra of the tube in order to permit the escape of blood. With one finger in the bladder this tube was carefully introduced into the new canal and retained in proper position by a suture at its perineal end. The defect in the perineum was closed. At the end of eight days the tube was withdrawn and in order to make sure that the epithelialization of the new canal was complete a new tube covered by a Thiersch graft was introduced.

2nd step. Eight days after the second graft a curved metal sound was introduced through the canal to the base of the bladder in the median line and the bladder was incised. A large Petzer catheter was passed from the bladder to the perineum. This catheter collected about fourteen ounces of urine a day, the rest escaping through the anterior orifice of the bladder because of the undue prominence of the interureteral ligament.

3rd step. After some weeks, during which the retention catheter had been frequently changed and the vesical orifice firmly established, an attempt was made to close the anterior orifice of the bladder by freshening its surface and utilizing the epispadic tubercle of the penis as an inverted U flap. The sutures held for the most part and the small fistula which persisted healed slowly under permanent drainage through the perineal meatus.

The patient was kept under observation for

several weeks. After the withdrawal of the retention catheter it was noticed that during the effort of defecation a few drops of urine escaped by the vesico-perineal canal, but the bladder was not continent and the tonicity of the sphincter in regard to continence of fæces was the same as before the operation. The patient was allowed to go home but returned very shortly with a suprapubic fistula, which was discovered to be due to a stricture of the newly formed canal, which would hardly permit the passage of a filiform. This stricture was dilated until it permitted the passage of a No. 28 sound. The tendency toward stenosis at the vesical extremity of the newly formed vesico-perineal canal is the weak point in the author's technique because it has a tendency to recur and must be kept dilated with sounds.

Almost a year has elapsed since the operation. The patient returns for periodic dilatation of the canal, which permits the entrance of a No. 28 sound. There is relative continence of the bladder; mornings, when he wakes, in pressing as for defecation he emits, in a stream, a quantity of urine varying between 150 and 200 cc. The amount of urine collected during the day is much less but the capacity of the bladder is 300 cc. During the day there escapes from the perineal orifice enough urine to oblige the patient to carry an apparatus for its collection. This is due to the weakness of the sphincter ani muscle. If this weakness does not improve the author intends to perform one of the usual operations for improvement of tone of the sphincter.

The author concludes that of all proposed methods for the treatment of exstrophy of the bladder, the only ones worthy of consideration are those which have in view the formation of a closed vesical cavity with a communication to the exterior under the control of the sphincter ani. Methods which utilize for this purpose any part of the digestive tract are too grave. Those which construct in the anal sphincter an entire segment of intestine weaken the already feeble sphincter ani too much to be effective. The methods which create an intra-sphincteric tube by means of a segment of the anterior wall of the rectum are too grave and too difficult because the operative field does not lend itself to the numerous sutures which are necessary. There is also the difficulty of excising enough of the rectal wall without producing a stenosis.

In most cases there exists a flap of vesical wall thick enough and wide enough to be utilized for the creation of a urinary reservoir. This reservoir, no matter how small, can be dilated enough to be serviceable; for this purpose the dilator invented by Nota is recommended.

In order to furnish a canal for the escape of urine, from the reservoir it is not necessary to resort to extensive plastics at the expense of the bladder or digestive tract, since a cutaneous plastic made from flaps of the perineum, completed by Thiersch grafts, can perfectly fulfill the conditions.

ELLIS FISCHER.

Oppel: Exclusion of the Bladder (Die Ausschaltung der Harnblase). *Arch. d. chir. Klin. d. Prof. Oppel*, St. Petersburg, 1913, iv, 3.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports twenty bladder exclusion operations performed in his clinic according to the method of Mirotworzeff. The ureters, after being liberated, were divided as near to the bladder as possible and implanted into the pelvic colon or into the lower sigmoid. The ureter stump was placed into an opening made in the bowel, mucosa being sutured to mucosa and reinforced by a second row of sutures. In the first row of sutures it was advisable to include the adventitia of the ureter to prevent the sutures from tearing out. The operation was performed for exstrophy and for carcinoma of the bladder (in the latter as a preliminary procedure), for high epispadias with a cleft sphincter, for vesicovaginal fistula in which a plastic operation proved unsuccessful and finally as a palliative procedure in inoperable carcinomata and severe tuberculous infection of the bladder.

In exstrophy of the bladder he author discarded the methods of Maidl and Ssubotkin, since they are accompanied by too high a mortality. Of eight cases operated according to the method of Mirotworzeff, two died, both under 7 years. The bladder itself was not removed until two weeks after its exclusion. In carcinoma of the bladder cystectomy was performed twice in the author's clinic after a previous exclusion according to Mirotworzeff.

The author collected ten cases from the literature, in six of which the urine was led externally and in the remaining four was led into the bowel. No deaths occurred among all these cases. The implantation method of Mirotworzeff, however, is to be preferred, since it does away with the agonizing urinary fistula. With the good results obtained in the two-stage bladder extirpation for carcinoma, the indications for this operation must be extended at the expense of resection in which poor results are obtained.

A well-functioning sphincter and a necessary condition for the operation. The condition of the kidneys also is important; advanced nephritis and pyelitis are contra-indications. A third contra-indication is youth; children under 10 years offer a high mortality. In conclusion Oppel asserts that although affections which indicate exclusion of the bladder are necessarily accompanied by danger of ascending infection, this is not so great, according to his experience, after operation as is generally supposed. In a series of his patients symptoms of unilateral or bilateral pyelitis set in shortly after operation, but they again disappeared after a time. Those patients who previously had perfectly healthy urinary tracts reacted more intensely, which must be attributed to an absence of local immunity. To minimize the danger of infection the author advises free catharsis and disinfection of the bowel, and immunizing the patient against the colon bacillus. In his last cases the author observed good results with

milk diet and with the ferment regulatic Chiari on the one hand and polyvalent coli vaccine on the other. In regard to the latter question a dissertation by Iljin will appear later. **RIESENKAMPFF.**

Buerger: A Clinical Study of the Application of Improved Intravesical Operative Methods in Diagnosis and Therapy. *Med. Rec.*, 1913, lxxxiii, 1114.
By Surg., Gynec. & Obst.

The author gives a detailed description of his instruments for intravesical operations. The many conditions in which these are of value are then discussed and cases cited in connection with each. Exploratory excision in suspected carcinoma of the bladder or prostate has been of great assistance in forming a diagnosis not only as to the presence or absence of carcinoma but also, if present, as to its probable source. Removal of other suspected vesical lesions is of diagnostic value and sometimes the simple removal results in a cure. Calculi can often be removed with the author's small instruments.

Dilatation of ureters is of service when there is a real stenosis of the ureter or in cases of ureteral calculi where the passage of the stone downward has been arrested. Renal tuberculosis can often be diagnosed from the microscopical examination of small vesical tubercles when no other definite sign of tuberculosis of the renal system can be determined. **J. H. SKILES.**

Hirsch: The Effect of Gonorrhœal Infections upon the Musculature of the Genito-Urinary Tract. *Am. J. Urol.*, 1913, ix, 283.
By Surg., Gynec. & Obst.

Author discusses the secondary symptoms produced by infiltrations and fibrous deposits in the genito-urinary muscles. He states that the so-called spasmodic stricture may be due to a swelling of the mucous membrane, or to muscular contraction, which again has to be classified as the inhibitory action of the bladder wall and the actual spasm of the urethral muscles. The close proximity of the ampulla and seminal vesicles to the bladder may induce, in their infected state, frequent bladder contractions, so-called bladder irritability and chronic cystitis, without causative evidences in the upper urinary tract. This condition is promptly relieved by emptying the seminal vesicles. **HARRY KRAUS.**

Pedersen and Cole: Mensuration and Projection of the Posterior Urethra and Vesical Floor by Means of Posterior Urethral Calipers and Radiography. *N. Y. M. J.*, 1913, xcvi, 1273.
By Surg., Gynec. & Obst.

To ascertain the exact position of the outlet of the bladder, the authors devised a new instrument of the catheter type, so that the bladder may be filled to moderate distention. When withdrawn until the flow ceases, the instrument occupies the exact outlet with the conical head, thus avoiding the uncertainties incident to the solid non-catheterizing instruments. This new instrument has a head 1 cm. long, mounted

on a 10 F. flexible copper catheter, of which the vesical outlet is 0.5 cm. back from the base of the head at the mid-point of a space 1 cm. long. This is followed by a smaller olive-form head, also 1 cm. long. Thus, when the conical head is in the bladder cavity at the neck, the outlet of the catheter will be closed by the sphincter muscle and the olive-form head will be about 1 cm. distal to the sphincter. To avoid the alteration of the shadow of the bladder and its relation with the upper margin of the symphysis, they had the cone of the tube carrier at a right angle to the table and its edge tangent either to the base of the penis in males, and clitoris in females, or to the upper limit of the symphysis, which is seemingly the appropriate position, as indicated by palpation.

The authors claim that the separation between the bladder shadow and the symphysis may be due to the opening up of the prevesical space through the weight of the distending fluid while the patient is in the recumbent position. This is important in dealing with X-ray work on the bladder. Another essential point is the position of the sphincter, as in the male it carries with it the upper surface or base of the prostate. The third important point for determination is the location of the apex of the prostate as the gland surrounds the posterior urethra. Calculi and other conditions somewhat discernible by the X-ray are in this portion of the gland and urethra. To locate the apex of the prostate they passed a small flexible bougie-à-boule alongside the catheter, not always with success, as the head was so small and frequently not between the finger and catheter, that it escaped detection in the bulb of the urethra and was thus advanced too far. They were not successful with an ordinary bougie-à-boule, 24 F., curved to agree with the standard sound inserted into the bladder and withdrawn until its head seemed to lock on the sphincter. Over its shaft was passed a blunt uterine curette with its point bent at right angles to its shaft, which was likewise slightly curved on the same radius. This large loop was easily advanced along the urethra and unmistakably felt in the bulb at the apex of the prostate. For accuracy in radiography of the pelvis, they use the transverse diameter of the true pelvis which passes approximately through the spines of the ischia at their bases. The advantage of this imaginary line is that it is slightly posterior to the position of the ureters. Many lesions begin on the floor near the ureters, and tumors of the prostate occur above the ureters first and foremost. There is usually a slight pouching of the bladder beyond this line; therefore the shadow of a stone in the bladder would be in this line, if the bladder is reasonably normal; above it, if there is much pouching, and below, if the bladder floor has been altered by operation.

J. RADDA.

Silva: The Comparative Value of Cystostomy and Urethrostomy in Operations on the Urethra.
Am. J. Urol., 1913, ix, 277. By Surg., Gynec. & Obst.

Silva lays stress upon the importance of diversion of the urine in all operations upon the urethra where

the urinary flow is likely to contaminate the operative site and interfere with primary healing of the wound. The former method of treatment of perineal urinary fistula by cauterization always failed. Equally unsuccessful were the attempts to cure by excision of the fistulous tract and introduction of a catheter. Prof. Marion now treats all cases of urethral fistula by diversion of urine. The author has notes of twelve cases which showed rapid and perfect cure, although some of them had been previously operated upon unsuccessfully.

Diversion of urine in operations for penile fistula and for well-limited perineal fistula is best done by a temporary urethrostomy behind the closed fistula. Where there are multiple fistulae (the so-called watering-pot perineum), supra-pubic drainage should be used. In all operations for hypospadias, save, possibly, in the Hacker-Beck operation for glandular hypospadias, diversion of the urine is essential for success. Diversion of the urine is likewise an important step in operations done for traumatic rupture of the urethra. The writer reports three such cases operated upon by Heitz-Boyer.

Silva describes an operation for hypospadias, dividing the operative technique into four steps:

1. The freeing and straightening of the penis.

Two months later the second step is carried out.

2. Resection of the new urethra.

3. Urinary diversion.

4. Closure of the abnormal meatus. This step is undertaken two months after cicatrization is complete, and it is advisable to again do urinary diversion.

ABE NELKEN.

GENITAL ORGANS

Schmutz: Comparative Study on the Treatment of Acute Gonorrhœal Epididymitis with Antimeningococcic Serum (Traitement des épididymites aiguës blennorrhagiques par le sérum antiméningococcique; étude comparée). *Thèse de doct.*, Par., 1913, June.

By Journal de Chirurgie.

This treatment is justified by the morphological and biological affinities of the gonococcus and meningococcus. From the study of 52 cases, the writer draws the following conclusions: Pain is promptly relieved, as early as the second or third hour after the injection. The injection sometimes causes a temporary rise in temperature, but the latter is followed by a marked fall. The acute inflammatory symptoms and the oedema subside in 24 or 36 hours; the effusion in the tunica vaginalis, if any, undergoes resorption, sometimes in 48 hours, but more often in 5 or 6 days. The infiltration of the epididymis yields more slowly, a decrease in volume being noticeable only after 3 or 4 days. All induration disappears in from 10 to 18 days.

Six patients were seen a few weeks after the treatment; in five the epididymis was perfectly normal; in one a slight node persisted. The patency of the epididymis could not be tested, but, judging from the perfect anatomical restitutio ad integrum, it is very probable.

One injection (20 cc.) is often enough; more than three are required only in exceptional cases. No anaphylaxis phenomena were ever noted. This method is far superior to all other treatment, either by operation, hyperæmia, injection of colloidal silver or of vaccines. The injection of antigonococcic serum alone can compare with it. GASTON PICOT.

Barney: Tuberculosis of the Epididymis: Its Effect upon Testicles and Prostate. *Boston M. & S. J.*, 1913, clxviii, 923. By Surg., Gynec. & Obst.

In two previous articles the author contended that the prostate was the focus in tuberculosis of the male genital tract. In the present paper, illustrated by two charts, Barney overthrows his previous contention and shows conclusively that the primary focus is to be found in the epididymis in the vast majority of cases. The rôle of the prostate in the symptom-complex is carefully considered.

In making a plea for more light on this perplexing question Barney quotes the words of Hallé and Motz.

"An integral mass of statistics, patiently followed up, on pulmonary tuberculosis on the one hand, and on genito-urinary tuberculosis on the other, from the earliest clinical side of the patient to the ultimate issue will furnish sufficient and certain conclusions. We do not yet possess such a mass of statistics."

He also strongly emphasizes the futility of removing the testicle in the belief that cure is more likely to follow. Except in rare cases epididymo-vasectomy is the operation of choice.

The writer's conclusions are as follows:

1. In genital tuberculosis, the epididymis is the primary focus in the vast majority of cases.

2. Tuberculosis of the epididymis becomes bilateral in 41.6 per cent of all cases, and becomes so within six months of the time of involvement of the first side in 30 per cent.

3. The prostate and vesicles are found to be infected in 75 per cent, this infection occurring in the first six months in 30 per cent and in the first year in 54 per cent. It is also shown that this infection takes place quite as often in the presence of unilateral, as of bilateral, epididymitis.

4. The urine is pathological in 43 per cent of all cases; bladder irritability is found in 35 per cent and in about half of these it occurs in the first six months.

5. In 33 per cent tuberculosis, past or present, of organs other than those of the genito-urinary tract is to be expected. The lungs are most often attacked.

6. Clinical observation shows tuberculosis of the testicle in 44 per cent, but the pathologist finds the disease in 66 per cent, and of these 53 per cent are found infected within six months of the onset of the epididymitis.

7. The records of 67 epididymectomies show that no case has yet returned for orchidectomy. The radical operation is, therefore, rarely necessary.

8. Infection of the first and second epididymis, as well as of prostate and vesicles, seems to be by the

blood or lymphatic streams, but it cannot be denied that in some, infection takes place through the vas by an ascending or descending process.

9. The operative mortality of 147 cases is 2.72 per cent, a general miliary tuberculosis being the most common cause of death.

10. As it has been shown that the infection may become widespread in the first six months of the disease, operation at the earliest possible moment is strongly indicated.

Bissel: Restoration of the Bladder Function after Prostatectomy. *Internat. J. Surg.*, 1913, xxvi, 193. By Surg., Gynec. & Obst.

The removal of the enlarged prostate is a comparatively easy procedure. Many attending conditions, however, may be much more difficult to treat. Distention of the bladder, changes in the mucous membrane, sacculations, paralysis of the bladder, musculature changes, altered relation of the muscle insertions, hypertrophy of the vesical wall followed by dilatation, the formation of stone, and even the growth of tumor, not to mention the cystitis with resulting inflammation of the ureters, pyelitis and the usually fatal nephritis following it, are some of the consequences arising from disease of the prostate and bladder.

The restoration of the bladder function is a very important part of the after-treatment of prostatectomy. A bladder which has long been over-distended usually contains foul residual urine and has an accompanying cystitis. Such a bladder does not regain its normal size and condition rapidly but only after prolonged treatment does improvement become marked.

The author has a decided preference for the perineal route for prostatectomy. His reasons are that this route favors drainage and allows the formation of a persistent sinus with less discomfort than does the suprapubic route. He believes in treating the bladder after operation with repeated irrigations. Many solutions are recommended but the author prefers either a weak alcohol solution with the addition of a small amount of glycerin or the employment of a weak solution of silver nitrate. In order to be effective these irrigations must be kept up for a considerable length of time and in some cases a permanent perineal sinus seems to give the most comfort.

Internal remedies, such as strychnine or atropine, are usually given. J. H. SKILES.

MISCELLANEOUS

Hess: Experimental Study Concerning Bacillus Coli Infection of the Urinary Organs (Experimentelle Untersuchungen über die Bacterium-coli-infektion der Harnorgane). *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 135.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Injections of virulent cultures of *B. coli* were made into healthy bladders and, in one instance, into a bladder previously irritated by an injection of tur-

pentine oil. In the latter instance there ensued a severe cystitis with marked pyuria. The other cases suffered only a more or less marked bladder irritability or inflammation of the mucosa. Injection into the renal pelvis without hindrance to the urinary stream provoked only a bacilluria with a few leucocytes, but no alterations in the pelvis or the canal-systems. After artificial ureteral constriction generally with a more or less persisting stasis (up to 68 hrs.) severe damage followed, chiefly in the region of the pelvis and upper part of the ureter. The infection was invariably ascending either through the canal or lymphatic systems. Intravenous injection with simultaneous artificial ureteral constriction gave rise to an infection of the ascending type in which the most marked changes were observed in the pelvis. In the unoperated side there were only minor, if any, alterations in the kidney.

In order to test the possibility of bacterial passage through the intestinal wall an artificial ureteral stenosis was produced and opium administered for a long time. No renal infection was demonstrable, cultures from bladder and pelvis being negative. The conclusions are as follows: *B. coli* is an organism pathogenic for rabbits, capable of producing deep-seated lesions in the urinary apparatus, and a factor in concrement production. Of greater importance is urinary stasis, which, even in the presence of most insignificant alterations in the urinary passages, invites infection with the *B. coli* and increases its virulence. The infection corresponds to the ascending type. Descending infection is possible, but infection from the intestine is hypothetical only as long as there is no proof of transmigration of bacteria through the intestinal wall either in conditions that are normal or described as "intestinal disturbances." The preponderance in women affected is due to local conditions (shortness of the urethra) which favor the ascent of the germ. In addition there are a number of contributory conditions, as gonorrhea, loosening of the mucosa in the menses and pregnancy. The unusual incidence in the right kidney is due to the anatomical structure, a predisposition of that kidney to lie abnormally low, in common with visceroptosis. In consequence there occurs a more or less persistent kink which by hindering the normal stream affords the first step in kindling an infection.

MÜNNICH.

Kelly and Lewis: Silver Iodide Emulsion—A New Medium for Skiagraphy of the Urinary Tract. *Surg., Gynec. & Obst.*, 1913, xvi, 707.

By Surg., Gynec. & Obst.

Everyone has found that all of the various media injected for X-ray purposes possess various disadvantages. Collargol is widely used and may be taken as a good example of the group. The chief objections to collargol are: (1) It is dirty and stains everything with which it comes in contact; (2) it is expensive; (3) it is a proprietary preparation.

Harmful results following collargol injection have

been reported from time to time. In two cases operated upon by Kelly in the last few months previously injected with collargol it was noticed that the perirenal tissues were discolored, the collargol having passed through the renal pelvis although the latter was intact. One of these cases required prolonged drainage before healing.

The use of an emulsion of the iodide of silver for skiagraphic purposes was suggested by the fact that it had already been used therapeutically in the bladder by Siter and Uhle. Silver iodide is insoluble in water and must, therefore, be suspended. This is best done in mucilage of quince seed. The preparations put out by different establishments vary a great deal, some being far better than others. Silver iodide is clean; it does not stain; its exact concentration is known and can be controlled. It is bland, stimulating and antiseptic. Its cost is inconsiderable. The silver iodide emulsion generally used by the authors in 5 per cent strength to inject the bladder, ureters or pelvis of the kidney casts a decidedly better shadow than does a collargol solution of equal strength. In fact, 5 per cent silver iodide emulsion in a test tube casts a shadow fully as dense as will a 10 per cent collargol solution. Less concentrated preparations may be employed if the cavity to be injected is of any size; as, for example, if the bladder is being X-rayed. Some have feared that silver iodide emulsion injected into the ureters might precipitate, leaving behind particles which might be the nidus of a future stone, but the authors are convinced that this fear is groundless. They conclude, that silver iodide emulsion carefully prepared in a 5 per cent strength is a safe preparation to use for radiography of the entire urinary tract. It is non-toxic and can safely be used even in large amounts.

Smith: The Excretion of Formalin in the Urine; an Inquiry into the Accuracy of Burnam's Test. *Boston M. & S. J.*, 1913, clxviii, 713.

By Surg., Gynec. & Obst.

Burnam's test consists in adding three drops of 0.5 per cent aqueous solution of phenolhydrazine hydrochloride, three drops of 5 per cent aqueous solution of sodium nitroprusside and then an excess of a saturated aqueous solution of sodium hydroxide. The solution to be tested and the sodium hydroxide must be heated a little above body temperature. Formaldehyde, 1-20,000 or stronger, causes an intense blue which changes to green and then brown. In solutions 1-150,000 up to 1-20,000 the first color is green, going over into brown. Urotropin will not give this reaction. Urotropin may be broken down by acidulating with sulphuric acid and boiling, when the solution will react.

The article outlines the work of determining the conditions under which the test is of most value; the attempt to determine the conditions causing breaking down of urotropin by kidney or urine; and the relation of acidity by litmus test and hydrogen ion concentration.

EARLE B. FOWLER.

SURGERY OF THE EYE AND EAR

EYE

Ball: Amblyopia from Hæmorrhage. *Interst. M. J.*, 1913, xx, 531. By Surg., Gynec. & Obst.

Of the cases in the literature of disturbance of vision as a result of hæmorrhage, the hæmorrhage was from the stomach in thirty-six per cent, from the uterus in twenty-five per cent, from the nose in seven per cent, from accidental wounds in five per cent, from intentional loss of blood in twenty-five per cent and from pulmonary and urethral bleeding in one per cent.

Disorders of vision following hæmorrhage occur almost without exception in persons who were previously not healthy. In twenty-five per cent of cases loss of sight appeared during or immediately following the hæmorrhage, in twenty per cent during the first twelve hours and in fifty per cent during the first three weeks.

The ophthalmoscope findings do not correspond to the degree of loss of vision. C. G. DARLING.

Meller: Chronic Inflammatory Tumor Formations of the Orbit (Über chronisch-entzündliche Geschwulstbildungen der Orbita). *Arch. f. Ophthalmol.*, 1913, lxxxvii, 146.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Meller reports nine cases of chronic inflammatory tumor formations of the orbit which were observed during the last twenty years in Fuchs's clinic. Clinically they appeared as malignant tumors and the operative measures were more or less radical. Histological examinations, however, showed that they were chronic inflammatory tumor formations which in six cases were probably of luetic origin. In two cases the nature was unknown; in one the tumor originated from the frontal cavity.

Meller emphasizes the necessity of ascertaining the malignancy of the tumor by using the tuberculin and Wassermann tests, mercury treatment, examination of the accessory cavities, exploratory excision, etc., before performing any operation.

KIRSCH.

Mathewson: A Case of Pulsating Exophthalmus. *Ophth. Rec.*, 1913, xxii, 294. By Surg., Gynec. & Obst.

Mathewson reports a case of pulsating exophthalmia following a fracture of the base of the skull. When first seen by Mathewson, four weeks after the accident, there was complete ptosis of left upper lid, swelling of conjunctiva, fundus normal vision fingers at eight feet in upper half of field. There was no vision in lower field and no pulsation of eyeball. Vision was undoubtedly damaged by the laceration of the optic nerve. The common carotid was tied

and a month later there was little proptosis and no pulsation or bruit. Vision, of course, was not improved. C. G. DARLING.

Weidler: Concerning Dermoids and Dermolipomas of the Conjunctiva. *Ophth. Rec.*, 1913, xxii, 291. By Surg., Gynec. & Obst.

Weidler reports two cases of dermoid of the cornea, both being located at the outer lower quadrant. Both were solid, one about 5 x 9 mm., the other about 5 x 7 mm. in size. The only other congenital defect was the absence of a nail on the little finger of the right hand in one of the cases. C. G. DARLING.

Wyler: Enucleation Under Ciliary Ganglion Anæsthesia. *Lancet-Clin.*, 1913, cix, 648. By Surg., Gynec. & Obst.

Wyler discusses enucleation under ciliary ganglion anæsthesia and follows the technique of Sowański. In a summary of cases operated on he says:

1. Local anæsthesia is certainly less dangerous and more agreeable than general for enucleation.

2. Upon cutting the optic nerve none of the five cases saw the flash of light to which one sees so many references.

3. The method is a very easy procedure.

4. It is applicable to inflammatory conditions when infiltration has proven unsuccessful.

5. Healing is rapid.

6. He believes that this anæsthesia may be popular in the future for other painful operations upon the globe. C. G. DARLING.

EAR

Nelson: The Value and Indications for Incision of the Eardrum in Otitis Media. *Atlanta J.-Rec. Med.*, 1913, lx, 106. By Surg., Gynec. & Obst.

The author points out the fallacy of considering otitis media as a self-limited disease and of waiting for spontaneous perforation of the eardrum. The word "incise" instead of the term "paracentesis" is suggested and in opening the eardrum for middle ear disease it should be freely incised. The best rule as to the location of the incision is to incise at the point of bulging, if it is localized in some one portion of the eardrum. When the bulging is general, the posterior inferior quadrant of the membrana tympani is the safest and best place to incise. Here an incision can be carried upward and backward to the superior posterior border with the knife plunged deeply enough to incise freely through the mucosa covering the inner wall of the middle ear. For this purpose the von Graefe cataract knife is the simplest and best.

Dr. Nelson reports incision of the drum in 102 cases of acute, and in 3 cases of chronic, otitis media. Only two subsequently required mastoid operations. All of the 102 cases showed objective and subjective symptoms of extension into the mastoid antrum, if not into the mastoid cells, and in practically every case, including the two operated upon, all the symptoms disappeared either wholly or in part within 24 hours.

In those cases of chronic suppurative otitis media in which the drum was incised, only temporary amelioration of the condition was obtained and the procedure had to be repeated several times. These cases were chronic before seen in the clinic.

With the results noted in the acute cases, it is reasonable to suppose that early incision of the drum, or other appropriate treatment, will in all probability arrest serious results. WALTER H. THEOBOLD.

Pierce: Preservation of the Antral Capsule in Operations for Acute Suppurative Processes of the Mastoid. *Tr. Am. Otol. Soc.*, 1913, May.

By Surg., Gynec. & Obst.

The antral capsule may be more or less differentiated from the rest of the bone as it possesses a marked resistance to inflammatory and softening processes to which the mastoid is subject. On this point rests the success of Pierce's operation in preserving the antral capsule. This capsule is that portion of the temporal bone bounded above by diploëtic bone and pneumatic cells lying between the antral cavity and the inner table of the skull, anteriorly by the interposed pneumo-diploëtic bone and compact substance of the external auditory canal; the outer wall by the same character of bone; posteriorly by the compact substance sent in from the roots of the zygomatic process, small pneumatic spaces, and the walls of the sigmoid sinus; and inferiorly by the cubiform plate.

In acute inflammations in the mastoid, perforation of the mastoid antrum is invariably through the cubiform floor and downward, this being the line of least resistance to the softening process. If the box which contains the antrum is destroyed it has been noted that the mucosa from the ear spreads over the osseous structures, making a permanent, large dependent cavity lined with muco-periosteum of very low resistance and hence long after-treatment.

Dr. Pierce's operation procedure is to preserve this box. The incision is made as in all mastoid operations and the antrum entered from below, taking off the cortex of the bone about half an inch from the tip upward to the lower margin of the mastoid fossa, forward to the hard bony substance of the external

auditory canal and posteriorly about a finger's breadth from this. The soft bone is scraped out and a search made for the fistula which is almost invariably found descending from the cubiform plate of the mastoid antrum downward. Only enough of the soft bone from the bottom of the antrum is removed to admit a small rubber drainage tube. The rest of the diseased portion of the mastoid is removed, care being taken to preserve the antrum box. An infant's catheter is then inserted into the antrum, through its floor, and the cavity in the mastoid is packed about the tube with zeroform gauze.

The external auditory canal is also packed with gauze and a 50 per cent alcohol dressing applied over the wound, is changed daily. On the third or fourth day the antrum is irrigated through the catheter, and on the fifth day the packing is removed. If the auditory canal is dry the tube is removed and from then on the wound is packed loosely until sealed.

The advantages of this operation are: (1) Rapidity of healing. (2) Avoidance of ugly, disfiguring scars. (3) The avoidance of a large permanent cavity lined by mucosa from the middle ear.

WALTER H. THEOBOLD.

Comparriol: Two Cases of Trepanation of the Labyrinth, Operation and Cure (Zwei Fälle von Trepanation des Labyrinthes, Operation, Heilung). *El siglo méd.*, 1913, No. 3102, 322.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Two cases are reported in which a suppurative otitis media involved the labyrinth (rotatory dizziness). At the operation in both cases the posterior arch was opened. Uninterrupted recovery resulted.

DENKS.

Bellows: Aural Spades and Angular Curettes. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 215.

By Surg., Gynec. & Obst.

Bellows has devised the so-called aural spades for the separation of masses of impacted cerumen from the wall of the canal, at one point, as the first step in its removal. They are non-cutting instruments, and sufficiently thin to be insinuated in the merest chink between the mass and the canal wall, and at the same time are sufficiently strong to permit of considerable pressure on the mass to separate it from the wall. They are to be used only by the experienced and under the control of perfect illumination.

For use in conjunction with Buck's ring curettes, the author has designed a series of angular curettes in blunt form for removing cerumen and exudation, and sharp, for operating. EARLE B. FOWLER.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Ibbotson: Some Notes on the Treatment of Atrophic Rhinitis by Doriform. *Med. Press & Circ.*, 1913, xcvi, 658. By Surg., Gynec. & Obst.

This drug, a greenish yellow organic powder, was used as .5 per cent (corresponding to iodoform 1 per cent) suspension in glycerine or olive oil, and applied with a swab or spray. It was very effective in atrophic rhinitis, in preventing crusting and ozena, and of value in some cases of chronic otitis media. No toxic effects were noted and the author considers it an efficient, odorless substitute for iodoform.

EARLE B. FOWLER.

Gabell: An Extreme Example (Unilateral) of the Antral Cavity Extending Between the Molar Roots. *Proc. Roy. Soc. Med.*, 1913, vi, Odontol. Sect., 128. By Surg., Gynec. & Obst.

This report is the case of a girl aged twenty, whose antrum floor extended 6.5 mm. below the roots of the second molar. Between the roots of the first molar, the floor extended down 4.5 mm., completely occupying the space between the lingual and the disto-buccal roots which act as part of its walls. On the right side the floor did not extend as far as the apices of any of the teeth. There was no history of antrum disease and the wounds healed satisfactorily.

H. A. PORTS.

Tilley: An Instrument for Expediting the Examination of Embedded Tonsils. *Proc. Roy. Soc. Med.*, 1913, vi, Laryngol. Sect., 123.

By Surg., Gynec. & Obst.

The instrument is shaped like an ordinary Frammel's tongue depressor, but the distal end is replaced by a small concave bar placed at right angles to the shaft. If the outer portion of the tonsil is pressed on, the gland tends to face the observer. Often by this instrument may be expressed septic accumulation which otherwise might pass unnoticed.

EARLE B. FOWLER.

Peters: Cyst of Arytæno-Epiglottidean Fold Which Burst Spontaneously. *Proc. Roy. Soc. Med.*, 1913, vi, Laryngol. Sect., 126.

By Surg., Gynec. & Obst.

Symptoms of slight choking and loss of voice grew progressively worse over a period of eight

weeks, during which time the cyst could be seen to enlarge. At the end of that time the symptoms cleared up and the serous fluid could be seen coming from the rent in the capsule. The discussion brought out the necessity of using galvano-cautery or removing the cyst completely to prevent refilling.

EARLE B. FOWLER.

Hopenwell-Smith: The Structure of the Dental Pulp in Ovarian Teratoma. *Proc. Roy. Soc. Med.*, 1913, vi, Odontol. Sect., 131.

By Surg., Gynec. & Obst.

In the discussion of a paper of last year, Bland-Sutton expressed the opinion that it would be of interest to know if the teeth found in ovarian teratomata possess nerves. The study of a specimen which had been fixed en masse in formalin, rapidly decalcified, embedded in a saturated solution of dextrine and cut on an ether freezing microtome, showed small dimension of the pulp, its outline less regular than the normal organ and varying with the shape of the tooth itself. The pulp is composed of a tissue closely resembling that in normal teeth. It has a delicate connective tissue consisting of ramified cells embedded in a slightly fibrous stroma and granular transparent basis substance, plentifully supplied with blood vessels and nerves. The odontogenetic zone is clearly seen, the odontoblasts are short and thick, and the blood vessels run in the direction of the long axis and are accompanied by prominent bundles of medullated nerve fibers which are larger in proportion than those of adult teeth.

H. A. PORTS.

Von Tappeiner: Tuberculosis of the Gums (Über Zahnfleisch-tuberkulose). *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 339.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Twenty-six cases of primary tuberculosis of the gums have been reported. Thirty others appeared in cases with pulmonary lesions. The symptoms consist of swelling, sponginess, ulceration and bleeding of the gums. In doubtful cases microscopical examination decides the question. Healing is usually very rapid after radical removal of the diseased tissue. The author describes one case.

KINDL.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

Temperature observations by means of continuous registration. HAUPT. Kong. f. inn. Med., Wiesbaden, 1913.

Operative technique. A. R. GRANT. North Am. J. Homœop., 1913, xxviii, 342.

Fixation of the operative field. GELTONOVSKY. Russk. Vrach, St. Petersburg., 1913, xii, No. 20.

Principles and suggestions with regard to the first dressing of wounds. VON EISELSBERG. Wien. klin. Wchnschr., 1913, xxvi, No. 23.

A note on the preparation and use of subgallate of bismuth gauze. E. A. R. NEWMAN. Lancet, Lond., 1913, clxxxiv, 1794.

Adhesive support for tension sutures. C. L. HEALD. J. Am. M. Ass., 1913, lx, 1954.

Early leaving of the bed after laparotomies. KOHL-SCHUTTER. München. med. Wchnschr., 1913, lx, No. 25.

The treatment of granulation of wounds. BERGEAT. München. med. Wchnschr., 1913, lx, No. 25.

Aseptic and Antiseptic Surgery

Notes on the disinfection of the hands. SCHOTTELIUS. Ztschr. f. Med., 1913, xxvi, 530.

The theory of disinfection. P. EISENBERG and M. OKOLSKA. Zentralbl. f. Bakteriöl., 1913, lxix, 312.

Some useful hints on disinfection. S. R. KLEIN. Therap. Rec., 1913, viii, 180.

On the question of catgut. CLAUSEN. Fortschr. d. Med., 1913, xxxi, 505.

Comment on Felix Hagen's article entitled "Conservation and Sterilization of Half-Soft Instruments." DUFAUX. Ztschr. f. Urol., 1913, vii, 378.

Iodine fumigation. BARGUES. J. de méd. de Bordeaux, 1913, xliii, No. 25.

Noviform as a substitute for iodoform in surgery. D. L. FRISCHBERG. Novofo v Med., St. Petersburg., 1913, vii, 391.

Anæsthetics

Anæsthesia and anoci-association. GEO. W. CRILE. Surg., Gynec. & Obst., 1913, xvi, 627.

The kinetic theory of surgical shock and anoci-association. GEO. W. CRILE. Interst. M. J., 1913, xx, 499.

Narcosis: I. Critical survey of the relations between narcosis and respiration of oxygen. HANS WINTERSTEIN. Biochem. Ztschr., 1913, li, 143.

Theoretical considerations on mixed narcosis. Counter-reply to the reply of Bürgis on "Combination of Narcotics." GERTRUD WOKER. Ztschr. f. allg. Physiol., 1913, xv, 49.

Oxygen and anæsthesia. F. H. McMECHAN. Internat. J. Surg., 1913, xxvi, 205.

Nitrous oxide and oxygen anæsthesia. E. M. PRINCE. Surg., Gynec. & Obst., 1913, xvi, 622.

Further report on nitrous oxide-oxygen anæsthesia. SOUTHGATE LEIGH. Am. J. Surg., 1913, xxvii, 222.

The effect of chloroform narcosis upon the protein metabolism; contributions to the physiology of the thyroid gland. ELISABETH HAMBURGER. Arch. f. d. ges. Physiol., 1913, clii, 56.

A new procedure for ether dropnarcosis. NOWIKOFF. Russk. Vrach, St. Petersburg., 1913, xii, No. 19.

A simple method of drop-infiltration narcosis by the aid of gauze compresses. NOWIKOFF. Russk. Vrach, St. Petersburg., 1913, xii, 682.

Anæsthesia by means of infiltration in oto-rhino-laryngology. JACQUES. Rev. méd. de l'est, Nancy, 1913, xlv, No. 11.

Anæsthesia by intratracheal insufflation from the physiological and clinical standpoint. F. COTTON and W. BOOTHBY. Clin. Med., 1913, xii, 159.

Results obtained with intratracheal insufflation after Meltzer's method. STORM VAN LEEUWEN. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 25.

An artificial airway for surgical anæsthesia. ROBERT H. FERGUSON. J. Am. M. Ass., 1913, lx, 1858.

Textbook of local anæsthesia for students and physicians. GEORG HIRSCHER. Wiesbaden, Bergmann, 1913.

Anæsthesia of the brachial plexus after the method of Kulenkampff. P. BABITZKY. Vrach. Gaz., St. Petersburg., 1913, xx, 681.

Injuries of the nerves in anæsthesia of the solar plexus. M. HIRSCHLER. Zentralbl. f. Chir., 1913, xl, 766.

Intravenous hedonal narcosis. N. I. BERESNEGOWSKI. Chir. Arch. Vellaminova, St. Petersburg., 1913, xxix, 208.

Spinal anæsthesia. BARUCH. J. méd. de Brux., 1913, xviii, No. 22.

The Ingleby lecture on spinal anæsthesia by tropococaine, with a review of 1,295 cases. J. T. J. MORRISON. Brit. M. J., 1913, i, 2738.

Experiences with tropococaine spinal anæsthesia. S. TSURUTA. Sei-I-Kwai M. J., 1913, xxxii, No. 6.

Lumbar anæsthesia by means of novocaine. LÉPOUTRE. J. d. sc. méd. de Lille, 1913, xxxvi, No. 21.

Experiments in regard to the methods of using magnesium narcosis. G. MANSFIELD and STEPHAN BOSANYI. Arch. f. d. ges. Physiol., 1913, cxiii, 75.

The combined scopolamine-pantopon narcosis. J. P. SKIJAROFF. Novole v Med., St. Petersburg., 1913, vii, 129.

The lachrymal gland in surgical anæsthesia. L. T. RUTHERFORD. Brit. M. J., 1913, i, 2738.

Surgical Instruments and Apparatus

Improved device for illuminating the operating room. WILLARD BARTLETT. J. Am. M. Ass., 1913, lx, 1846.

A new lamp for use in diaphanoscopy and endoscopy. HANS REUTER. München. med. Wchnschr., 1913, lx, 1548.

Some simple attachments for electric hand lamps. F. H. VERHOEFF. Ophth. Rec., 1913, xxii, 298.

A radiographic apparatus which can be transported on the automobile. HAZLETON. Arch. d'électr. méd., exp. et clin., Bordeaux, 1913, xxi, No. 360.

Operating table for rhinologists. C. G. DWIGHT. J. Am. M. Ass., 1913, lx, 1951.

Fracture and orthopedic table. G. W. HAWLEY. J. Am. M. Ass., 1913, lx, 1850.

Description of a simple apparatus for the application of plaster jackets in hyperextension. PRESCOTT LE BRETON. Buffalo M. J., 1913, lxviii, 626.

A new sterilizer for instruments, which has a number of compartments and automatically insures sufficient sterilization. GUSTAV SPIESZ. Deutsche med. Wchnschr., 1913, xxxix, 1049.

An apparatus for the sterilization of liquid soap; an apparatus for the sterilization of brushes. ANGELESCO. J. de chir. de Bucarest, 1913, i, No. 1.

A modified La Force adenotome and its use. B. F. BEEBE. Ohio St. M. J., 1913, ix, 280.

A simple canula for puncture, injection and infusion. F. LOTSCH. Zentralbl. f. Chir., 1913, xl, 908.

A new tonsil-snare. L. D. GREEN and A. S. GREEN. J. Am. M. Ass., 1913, lx, 2043.

New tonsil clamps. M. D. STEVENSON. J. Am. M. Ass., 1913, lx, 2044.

A new gastro-intestinal clamp. NUSSBAUM. Zentralbl. f. Chir., 1913, xl, 953.

A new abdominal compress. TSAKONA. Grèce méd., 1913, xv, No. 9.

A universal douche attachment for cystoscopes. A. LEWIN. Ztschr. f. Urol., 1913, vii, 387.

Double vulsellum cervix forceps. H. F. DAY. J. Am. M. Ass., 1913, lx, 1952.

The "Antifluor," a new instrument for the dry treatment of vaginal catarrh. LIEPMANN. München. med. Wchnschr., 1913, lx, 1383.

A new abdominal speculum for use in laparotomies. E. KAUTT. Zentralbl. f. Gynäk., 1913, xxxvii, 902.

SURGERY OF THE HEAD AND NECK

Head

Primary purulent inflammation of the salivary glands in early infancy. JULIUS LEWIN. Arch. f. Kinderh., 1913, lx, 462.

A case of salivary calculus in Wharton's duct; review of subject. E. R. BUSH. Indianapolis M. J., 1913, xvi, 232.

Tumors of the salivary glands. HERMANN HEINEKE. Ergebn. d. Chir. u. Orthop., 1913, vi, 239.

Traumatic facial hemispasm. T. TUFFIER. Bull. et mem. Soc. de chir. de Par., 1913, xxxix, 596. [381]

My experience with the treatment of neuralgia of the trigeminal nerve by injections of alcohol. OFFERHAUS. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 21.

The cosmetic correction of paralysis of the facial nerve by means of transplantation of fascia. STEIN. München. med. Wchnschr., 1913, lx, No. 25.

Cosmetic improvement of the deformities caused by paralysis of the facial nerve. BUSCH. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, 1913, lxviii, Nos. 2-3.

Treatment of neuralgia and facial spasm by nerve injections. H. CAMPBELL. Practitioner, Lond., 1913, xc, 991.

The treatment of facial paralysis by nerve transplantation. STEPHEN H. WATTS. Old Dominion J. M. & S., 1913, xvi, 259.

Some endocranial operations for the treatment of facial neuralgia; pregasserian resections, gasserectomy or retro-gasserian neurotomy. DE BEULE. J. de chir. belge, Brux., 1913, xiii, No. 5.

Partial resection of the inferior maxilla by the buccal path of access in cases of cancer of the isthmus of the pharynx. GAULT. Rev. hebdomadaire de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 24.

Unilateral temporo-maxillary ankylosis, diagnosed by the aid of radiography; aponeurotic graft to prevent recurrence. DESCARPENTRIES. Echo méd. du nord, Lille, 1913, xvii, No. 24.

Extended operation for malignant tumors of the upper maxilla. F. KUHN. Deutsche med. Wchnschr., 1913, xxxix, 934.

Protheses of the nose. BRUNO KLEIN. Oesterreich.-ungar. Vierteljahrsschr. f. Zahnheilk., 1913, xxix, 179.

Paraffin prostheses and nasal deformities. LAGARDE. J. de méd. de Par., 1913, xxxiii, 423.

Endothelial sarcoma of the temporal bone. EISENBERG. Vrach. gaz., St. Petersburg, 1913, xx, No. 19.

Sarcoma of the petrous portion of the temporal bone in a child of five years; propagation to the cerebellar meninges and to the roots of the mixed nerves of the base. CRUCHET, DUVERIE and DUBOURG. J. de méd. de Bordeaux, 1913, xliii, No. 24.

Operation for extensive tumors at the base of the skull. SCHLOFFER. Prag. med. Wchnschr., 1913, xxxviii, No. 26.

Cranial deformities associated with ocular symptoms. LARSEN. Hosp.-Tid., Kjøbenhavn, 1913, lvi, No. 25.

Perforating wound of the cranium caused by a revolver bullet; cranio-meningoectomy; recovery. DRE KOLLIAS. Grèce méd., Athens, 1913, xv, No. 7.

The limitations and possibilities of X-ray skull diagnosis. GEO. EARL. J.-Lancet, 1913, xxxiii, 307. [381]

The Röntgen ray as an aid in the diagnosis of fractured skulls. WM. H. STEWART. Am. Quart. Röntgen., 1913, iv, 217.

The diagnostic evidence obtained by X-rays from the lateral aspect of the skull, with especial reference to the base and its adnexa. PERCY BROWN. Boston M. & S. J., 1913, clxviii, 882. [381]

Traumatic epilepsy. MARCHAND. Clinique, Par., 1913, viii, 210. [382]

A contribution to the pathological surgery of Jacksonian epilepsy in uremia. GEIMANOWITSCH and STOMIN. Charakofsky med. J., 1913, xv, 27.

Permeability of the meninges. WEIL and KAFKA. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlii, No. 4.

Permeability of the meninges. ZALOZIECKI. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlii, No. 4.

Experimental researches on the plexus choriodeus and the meninges. GOLDMANN. Arch. f. klin. Chir., 1913, ci, No. 3.

Primary melanosis of the pia mater. K. J. SCHOPPER. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, 77.

A case of meningeal tumor. URECHEA and POPEA. Spitalul, Bucuresci, 1913, xxxiii, No. 8.

Serous meningitis. L. E. GREGMAN and G. KRUKOWSKI. Monatschr. f. Psychiat. u. Neurol., 1913, xxxiii, 283.

Some remarks on meningitis, with a report of two fatal cases in which Haunes' operation was performed. H. WILSON. *Physician & Surg.*, 1913, xxxv, 241.

Prognosis and treatment of meningitis. REICHMANN. *München. med. Wchnschr.*, 1913, lx, No. 25.

Investigations in regard to the relations of certain tissue reactions to the early diagnosis and surgical treatment of meningitis. KOPETZKY. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw.*, 1913, lxviii, 1.

The autoplasmic closure of dural defects. SMIRNOFF. *Dissertation, St. Petersburg.*, 1913. [382]

The technique of arresting hæmorrhage from the sinus of the brain. M. BORCHARDT. *Zentralbl. f. Chir.*, 1913, xl, 1003.

A case of idiopathic hydrocephaly in an adult. VIRCHOWSKY. *Pract. Vrach, St. Petersburg.*, 1913, xii, No. 19.

The operative treatment of hydrocephalus. R. WENGLOWSKI. *Chir. Arch. Vellaminova*, 1913, xxix, 179. [382]

Puncture of the corpus callosum. E. ARCHIBALD. *Canad. M. Ass. J.*, 1913, iii, 451. [383]

Phenomena of cranial hypertension and lumbar puncture. BABINSKI. *J. d. praticiens, Par.*, 1913, xxvii, No. 26.

The cure of a traumatic ventricular fistula. GOEPEL. *Zentralbl. f. Chir.*, 1913, xl, 869.

The anatomical results of air embolism of the brain. SPIELMEYER. *Kong. f. inn. Med., Wiesbaden*, 1913.

Diagnosis and surgical treatment of some brain diseases. Z. BYCHOWSKI. *Neurol. Zentralbl.*, 1913, xxxii, 613.

Cerebral concussion with localizing symptoms; a report of three cases; recovery following surgical treatment. T. KLINGMANN. *Physician & Surg.*, 1913, xxxv, 249.

Destructive contusion of the right cerebral hemisphere by a bullet, without lesion of the cranial wall or the dura mater. GIORGI. *Rev. osp., Roma*, 1913, iii, No. 10.

Injuries of the brain, spinal cord and nerves in the German Red Cross hospital in Belgrade. MUHSAM. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Abscess of the parietal lobe; hemianæsthesia; dyssymmetry and bradycinesia; asynergy; apraxia; disturbance of inhibitory functions. ANDRÉ-THOMAS. *Rev. neurol., Par.*, 1913, xxi, No. 10.

A case of cerebral abscess during bronchiectasis. SPAL. *Čas. lék. česk., Prague*, 1913, lii, No. 20.

Some general symptoms and their significance in the early diagnosis and treatment of cerebral tumors. LANDAU. *Przegl. lek., Krakow*, 1913, lii, No. 24.

The so-called binasal hemianopsia in brain tumors. W. B. LANCASTER. *Boston M. & S. J.*, 1913, clxviii, 878.

The absence of brain tumor symptoms in cases of tumors of the brain. W. J. BEERMAN. *Calif. St. J. Med.*, 1913, xi, 234.

A case of cerebral tumor. G. A. WETTERSTRAND. *Finsk. läk.-sällsk. handl., Helsingfors*, 1913, lv, 338.

A case of cavernous angioma of the brain. W. J. SWEASEY POWERS. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 1913, xvi, 487.

Researches on diffuse sarcomata in the central nervous system. A. WIMMER and HANS HALF. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 1913, xvi, 497.

Subdural hæmatoma. BERTELSMANN. *Med. Klin.*, 1913, ix, No. 23.

Endothelioma psammoma on the base of third ventricle of the brain and interpeduncular arachnoideal cyst, a tumor found principally in the cerebellum; the operation. H. HIGIER. *Neurol. Zentralbl.*, 1913, xxxii, 741.

Some cases of brain surgery in a country doctor's practice. E. E. LIGGETT. *J. Kansas M. Soc.*, 1913, xiii, 225.

Localization in the cortex of the cerebellum in man. BÁRÁNY. *Hygiea, Stockholm*, 1913, lxxv, No. 5.

Tumor of the cerebellum. SAMUEL S. ADAMS. *Arch. Pediatrics*, 1913, xxx, 465.

A case of a tumor of the cerebellum developing after a slight traumatism. THEILAND. *Ugesk. f. Læger, Kjøbenhavn*, 1913, lxxv, No. 25.

Another case of tuberculoma of the cerebellum. SALVATORE MAGGIORE. *Pediatrics*, 1913, xxi, 332.

Contributions to the histology of the human pineal gland. F. K. WALTER. *Ztschr. f. d. ges. Neurol. u. Psychiat.*, 1913, xvii, 65.

Affections of the pineal gland. ARTUR SCHÜLLER. *Handb. d. Neurol.*, 1913, iv.

A tumor of the pineal gland or of the cerebral epiphysis. VON HASSELT. *Nederl. Tijdschr. v. Geneesk., Amst.*, 1913, i, No. 19.

Case of infantilism associated with hypophysis tumor. E. J. MULLALLY. *Arch. Internal Med.*, 1913, xi, No. 5.

A new path of access for interventions on the hypophysis. NOWIKOFF. *Zentralbl. f. Chir.*, 1913, xl, No. 25.

A new operative method for the experimental study of the hypophysis. SCINICARIELLO. *Riforma med.*, 1913, xxix, No. 24.

Operations on the hypophysis by the nasal path; account of a personal case. HOLMGREN. *Hygiea, Stockholm*, 1913, lxxv, No. 5.

Neck

Is it always possible to avoid the facial twigs of the cervico-facial branch of the 7th pair in operations on the submaxillary fossa? A. POGGIOLINI. *Clin. chir.*, 1913, xxi, 1090. [383]

Abscess beneath the deep cervical fascia. N. A. POWELL. *Canad. Pract. & Rev.*, 1913, xi, 332.

A case of actinomycosis of the neck treated by subcutaneous injections of iodopin. FRANZ BITTNER and JOSEF TOMAN. *Prag. med. Wchnschr.*, 1913, xxxviii, 383.

A plasma-cell granuloma with the clinical picture of lymphoma of the lymphatic glands of the neck and inflamed nodules in the mucous membrane of the nose. KUSONOKI, MASANOBU and FRANK. *Virchow's Arch. f. path. Anat. u. Physiol.*, 1913, ccxii, 391.

Neurogenous wry neck. ALBERT BAUER. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 335.

Cervical ribs. K. MENDEL. *Neurol. Zentralbl.*, 1913, xxxii, 556.

The thyroid and parathyroid problem. JASPER HALPENNY. *Surg., Gynec. & Obst.*, 1913, xvi, 595. [384]

The spherulites of the thyroid gland. KRAUS. *Virchow's Arch. f. path. Anat. u. Physiol. u. f. klin. Med.*, 1913, ccxii, No. 3.

Echinococcus cysts of the thyroid gland. A. LANDIVAR. *Rev. de la méd. argent.*, 1913, xxi, 213.

Osteosarcoma of the thyroid gland. SOLARO. *Clin. chir., Milano*, 1913, xxi, No. 5.

The pathological anatomical changes in the thyroid of children in scarlet fever. K. E. GREGOR. *Pædiatria, St. Petersburg.*, 1913, iv, 285.

The relationship of thyreoparathyroidectomy to the carbohydrate metabolism. S. MIURA. *Biochem. Ztschr.*, 1913, li, 423.

Morphological studies in experimental cretinism. TATUM. *J. Exp. Med.*, 1913, xvii, 636. [384]

Acute Basedow's disease. FUNKE. *Prag. med. Wchnschr.*, 1913, xxxviii, No. 23.

The frequent occurrence of mild cases of Basedow's disease and the favorable influence exerted upon them by hygienic-climacteric factors. KUHN. *Med. Klin.*, 1913, ix, 834. [384]

An attempt to influence Basedow's disease by X-rays

applied to the ovaries. MANNABERG. *Wien. klin. Wchnschr.*, 1913, xxvi, 693. [384]

The operative treatment of Basedow's disease. SCHLOFFER. *Prag. med. Wchnschr.*, 1913, xxxviii, 313. [384]

Exophthalmic goiter; hyperthyroidism. W. B. WEIDLER. *N. Y. M. J.*, 1913, cxvii, 1293.

Hyperthyroidism and its treatment. STUART MCGUIRE. *Va. M. Semi-Month.*, 1913, xviii, 105.

SURGERY OF THE CHEST

Chest Wall and Breast

The internal secretion of the mamma. ALBRECHT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [385]

Pathological and clinical contributions on cancer of the breast. ALBERT SALOMON. *Arch. f. klin. Chir.*, 1913, ci, 573.

Cancer of the breast and hæmatic secretion; a case of "bleeding breast." POZZO. *Morgagni*, 1913, lv, No. 5.

Successful removal of an ulcerated carcinoma of the breast by the "Halstead method." JOSEPH D. FARRAR. *Penn. M. J.*, 1913, xvi, 705.

The problem in local recurrent breast cancer. C. W. STEOBELL. *N. Y. M. J.*, 1913, xcvi, 1176.

Paget's disease. A. A. SSINOSERSKI. *Chir. Arch. Velfaminova*, 1913, xxix, 336. [385]

Tuberculosis of the breast. A. D. KAPLAN. *Chirurgia*, 1913, xxxiii, 322.

Boning of the thoracic precordial wall in certain affections of the heart; report of case. J. E. SUMMERS. *Am. J. Surg.*, 1913, xxvii, 230.

Intrascapular thoracic amputation. EPSTEIN. *Chirurgia*, 1913, xxxiii, 344. [385]

Interscapulothoracic amputation of the shoulder. NORMAN B. CARSON. *Ann. Surg.*, Phila., 1913, lvii, 796. [385]

Multiple fractures of the thorax and the shoulder blade; a fracture and luxation of the shoulder. MATTEI, MARTIN-LEVAL and REBOUL-LACHAUX. *Marseille méd.*, 1913, l, No. 12.

Double luxation of the clavicle. KAMPTZ. *Med. Klin.*, 1913, ix, No. 25.

Fractures of the clavicle. DELBET. *J. d. praticiens*, Par., 1913, xxvii, No. 22.

Congenital cysts of the sternal region. H. L. ROCHER. *Enfance*, 1913, i, 346.

A report of seventeen cases of pulmonary tuberculosis treated by artificial pneumothorax. H. L. BARNES and F. T. FULTON. *Boston M. & S. J.*, 1913, clxviii, 917.

Indications and technique for artificial pneumothorax in pulmonary tuberculosis. A. STERNBERG. *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh.*, St. Petersburg, 1913, xxii, 27. [386]

Artificial pneumothorax for pulmonary hæmorrhage. A. STERNBERG. *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh.*, St. Petersburg, 1913, xxii, 34. [386]

Experimental studies in the treatment of pneumothorax. What effect does unilateral pneumothorax have on the tuberculous phenomena which follow intravenous and intratracheal infection? H. SCHUR and SIEGFRIED PLASCHKE. *Ztschr. f. exp. Path. u. Therap.*, 1913, xiii, 478.

The treatment of closed pneumothorax by means of aspiration and hyperpressure. GREIFFENHAGEN. *Zentralbl. f. Chir.*, 1913, xl, No. 23.

Empyema in infancy. FRITZ ZYBELL. *Ergebn. d. inn. Med. u. Kinderh.*, 1913, xi, 611.

A case of chronic empyema cured by resection of the ribs and decortication of the lung according to Delorme. DERJUSHINSKI. *Chirurgia*, 1913, xxxiii, 497.

Recurrent purulent pleurisy. COMBY. *Arch. de méd. d. enfants*, Par., 1913, xvi, No. 6.

Chronic mediastinitis following osteomyelitis of the sternum; report of a case and operation. H. M. ARMISTAGE. *N. Y. M. J.*, 1913, xcvi, 1244.

Two cases of primary tumors of the mediastinum. THÉVENOT and ROUBIER. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 68.

X-ray diagnosis of tuberculosis of the bronchial glands in children. NEUHAUS. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 4.

Trachea and Lungs

Tracheobronchoscopy after the method of Killian. NIKOLSKY. *Russk. Vrach*, 1913, xii, 720.

Two cases of death in bronchoscopic extraction of foreign bodies. HINSBERG. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw.*, 1913, lxviii, No. 2.

Experiences in surgery of the upper respiratory and alimentary tracts. GLUCK. *Berl. klin. Wchnschr.*, 1913, l, 953.

Primary cancer of the lung. WICZKOWSKI. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 26.

A case of suture of a bullet wound of the pulmonary artery. GEORG MARTIN. *Med. Cor.-Bl. d. württemb. ärztl. Landesver.*, 1913, lxxxiii, 333.

Total pulmonary embolism as a cause of post-operative death. PETREN. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 3.

Operative treatment of pulmonary embolisms. SCHUMACHER. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Modifications of the functioning of the diaphragm during pulmonary emphysema. HIRTZ and BRAUN. *Progrès méd.*, Par., 1913, xlv, No. 25.

Heart and Vascular System

Direct massage of the heart. WREDE. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Massage of the heart in chloroform syncope. GINO PIERI. *Riv. osp.*, Roma, 1913, iii, 304.

Traumatic rupture of the heart. PAPITOFF. *Pract. Vrach*, St. Petersburg, 1913, xii, Nos. 21 and 22.

Conservative cardiac surgery. MAX VON ARX. *Cor.-Bl. f. schweiz. Ärzte*, 1913, lxiii, 717.

Treatment of pericarditis with posterior extravasation. GORSE. *Progrès méd.*, Par., 1913, xlv, No. 23.

Extravasations of the pericardium. RAILLET. *Arch. méd.-chir. de Province*, Poitiers, 1913, viii, No. 5.

Posterior drainage of the pericardium and the pleura. TIEGEL. *Zentralbl. f. Chir.*, 1913, xl, No. 23.

The surgical treatment of pericarditis. KOLB. *Berl. klin. Wchnschr.*, 1913, l, No. 23.

A case of sacciform aneurism of the thoracic aorta. ROMANELLI. *Policlin.*, Roma, 1913, xx, No. 23.

The X-ray diagnosis of thoracic aneurism. R. D. CARMAN. *J. Mo. St. M. Ass.*, 1913, ix, 389.

Pharynx and Oesophagus

Examination of the hypopharynx and of the orifice of the oesophagus. BOUTIN. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 5.

Cast of epithelial lining of the œsophagus from a case of chloroform poisoning. G. N. BIGGS. *Proc. Roy. Soc. Med.*, 1913, vi, Laryngol. Sect., 123. [386]

Occlusion of the œsophagus by an intestinal nodule. DELANGALDE, WEILL and GAUTHIER. *Marseille méd.*, 1913, l, No. 11.

Foreign bodies in the œsophagus; two cases of rare complications. GANTZ. *Med. i kron. lek.*, 1913, xlviii, Nos. 24 and 25.

The removal of a foreign body from the œsophagus without making a lateral incision in the neck (tracheotomy lateralis). FELIX FRANKE. *Deutsche med. Wchnschr.*, 1913, xxxix, 1143.

Idiopathic dilatation of the œsophagus and Zenker's pharyngeo-œsophageal pressure diverticulum. JOHNSON. *Finsk. l k.-s llsk. handl.*, Helsingfors, 1913, lv, No. 5.

Diagnosis and treatment of cicatricial stenoses of the

œsophagus. GUISEZ. *Arch. d lectr. m d., exp. et clin.*, Bordeaux, 1913, xxi, No. 360.

A carcinoma of the œsophagus on dysontogenetic basis. GRABOWSKI. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 2.

Experimental contributions on surgery of the œsophagus. HOHMEIER and MAGNUS. *Med. Klin.*, 1913, ix, No. 22.

Thoracic œsophagectomy; report of a case. J. Y. BARBAT. *Calif. St. J. Med.*, 1913, xi, 225.

Pharyngectomy for epithelioma; recovery lasting three years. ABOULKER. *Bull. m d. de l'Alg rie*, Alger, 1913, xxiv, No. 10.

The first successful case of resection of the thoracic portion of the œsophagus for carcinoma. TOREK. *Surg., Gynec. & Obst.*, 1913, xvi, 614. [386]

The surgical treatment of carcinoma of the œsophagus. MEYER. *M nchen. med. Wchnschr.*, 1913, lx, No. 24.

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

Longitudinal or transverse incision? HELLENDAL. *Zentralbl. f. Gyn k.*, 1913, xxxvii, No. 25.

Pfannensti l's incision; technique; advantages and operative indications. SENECHAL and ENGEL. *Gaz. d. h p.*, Par., 1913, lxxxvi, No. 64.

A case of ossification in a laparotomy cicatrix. MARIO BORCHI. *Morgagni*, 1913, lv, 226.

The question of abdominal drainage. J. Y. WEINSTEIN. *J. Indiana St. M. Ass.*, 1913, vi, 258.

Fibroma of the abdominal wall. DUCUING and MARTY. *Toulouse m d.*, 1913, xv, No. 10.

A pedunculated necrotic tumor the size of a fist in the region of the umbilicus. K STNER. *Deutsche Gesellsch. f. Gyn k.*, Halle, 1913, May. [387]

Retroperitoneal abdomino-scrotal cystic lymphangioma. GAUDIER and GORSE. *Presse m d.*, Par., 1913, xxi, No. 46.

Intimate relations of the peritoneum to the uterine musculature. LA TORRE. *Arch. mens. d'obst. et de gynec.*, Par., 1913, ii, No. 5.

Peritoneal adhesions of the insidious toxic group. R. T. MORRIS. *Med. Herald*, xxxii, 199.

Biliary peritonitis without perforation of the bile passages. MACHEFER. *Th se de doct.*, Par., 1913. [387]

Remarks on the contribution of Prof. Nauwerck and Dr. L bke on "Does a Biliary Peritonitis Exist without Perforation of the Bile Passages." CLAIRMONT and VON HABERER. *Wien. klin. Wchnschr.*, 1913, xxvi, 891. [388]

Pneumococcic peritonitis. BARADULIN. *Chirurgia*, 1913, xxxiii, 527. [388]

Tubercular peritonitis. GERHARDT. *M nchen. med. Wchnschr.*, 1913, lx, 1629.

Two cases of tuberculous peritonitis treated by heliotherapy. A. CANTILENA. *Pediatrics*, 1913, xxi, 340.

Camphorated oil in peritonitis and abscesses of the cul-de-sac of Douglas. BLECHER. *M nchen. med. Wchnschr.*, 1913, lx, No. 23.

Development and aims of modern surgery in peritonitis. GLUCK. *Arch. f. Kinderh.*, 1913, lx-lxi, May.

The origin of tumors of the peritoneum (epiploitis plastica). EUGEN HOLL NDER. *Deutsche med. Wchnschr.*, 1913, xxxix, 845.

Pseudo-myxoma of the peritoneum of appendicular origin. DELETREZ. *J. de chir. belge*, Brux., 1913, xiii, No. 5.

Angioplastic surgery of the peritoneum by the employment of pedunculated flaps. JIANO. *J. de chir. de Bucarest*, 1913, i, No. 1.

The etiology of hernias. PAUL BERNSTEIN. *Med. Reform*, Berl., 1913, xxi, 236.

R ntgenological demonstration of diaphragmatic eventration. K. KAYSER. *Fortschr. a. d. Geb. d. R ntgenstr.*, 1913, xx, 240.

Hernia in infancy and childhood. DAVID ROSS. *J. Indiana St. M. Ass.*, 1913, vi, 270.

Cooper's hernia. A. P. KRYMOW. *Arch. f. klin. Chir.*, 1913, ci, 565.

A case of strangulated crural hernia associated with herniary appendicitis. LAHOZ. *Rev. med. d. Rosario*, Rosario de Santa-F , 1913, iii, No. 2.

Permanent results of operations for strangulated crural hernia. ROSENFELD. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 3.

Incarcerated hernia associated with ascaris lumbricoides. M. NIWA. *Igaku-Chuwo-Zassi*, 1913, No. 150.

Retrograde incarceration, hernia "en W." WALTHER WENDEL. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 536. [388]

A case of spontaneously incarcerated diaphragmatic hernia of the stomach, the spleen and a loop of bowel. SWETSCHNIKOW. *Morskoi Vrach*, 1913, April, 217. [389]

A case of diaphragmatic hernia in a phthisic adult. MELCHIOR. *Ugesk. f. L ger*, K benhavn, 1913, lxxv, No. 26.

A new method of treating umbilical hernia. J. H. PRINGLE. *Edinb. M. J.*, 1913, x, 493.

Inguinal hernia—a result of an accident? BIER. *Ztschr. f. Versicherungsmed.*, 1913, vi, 148.

The choice of operation for inguinal hernia. E. G. STERNER. *St. Paul M. J.*, 1913, xv, 290.

New operation for the cure of indirect inguinal hernia. U. C. BATES. *J. Am. M. Ass.*, 1913, lx, 2032.

The radical operation for intestinal hernia with incomplete hernial sac. SCHMIDT. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 266. [390]

Radical operation for hernia under cocaine analgesia; experience in twenty-five cases. R. G. SAYLE. *Wis. M. J.*, 1913, xii, 13.

Autoplastic suture material for use in herniotomy operations. GOLANITZKE. *Zentralbl. f. Chir.*, 1913, xl, 905.

The functions of the omentum and practical consequences which develop from their study. GUTIERREZ. *Rev. ibero-am r. de ci nc. med.*, Madrid, 1913, xxix, No. 105.

The importance of the omentum from the physiological and pathological point of view. GUNDERMANN. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 587.

Sarcoma of the omentum. M. A. TATE. *Am. J. Obst.*, N. Y. 1913, lxxvii, 1142. [390]

Cystic lymphangioma of the mesentery. D. RÓNA. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 122.

Chylous cyst of mesentery. A. L. BENEDICT. *Surg., Gynec. & Obst.*, 1913, xvi, 606. [390]

Thrombosis of the mesenteric artery. ERNEST LAPLACE. *Penn. M. J.*, 1913, xvi, 699.

The surgical aspects of persistent Meckel's diverticulum. HAMILTON DRUMMOND. *Surg., Gynec. & Obst.*, 1913, xvi, 656. [390]

Gastro-Intestinal Tract

The position and form of the normal human stomach. PATTERSON. *Brit. M. J.*, 1913, i, 1205.

A note on the shape of the normal empty stomach. J. S. B. STOPPORD. *Brit. M. J.*, 1913, i, 1206.

Movements of the stomach, the pylorus and the duodenal bulb. CARNOT. *Paris méd.*, 1913, No. 29.

Functional diagnosis of stomach diseases after Sahli's method. ZNOJEMSKY. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, Nos. 5-6.

Röntgenoscopic examinations versus clinical methods in the diagnosis of gastric disease. J. D. DUNHAM. *Med. Rec.*, 1913, lxxxiii, 1066.

The röntgenological behavior of the stomach in gastric crises and in vomiting. CZYHLARZ and SELKA. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 22.

Acute dilatation of the stomach and its treatment. O. BORCHGREVINK. *Surg., Gynec. & Obst.*, 1913, xvi, 662. [391]

Gastric dilatation; its treatment by removal of gastric contents, starvation and rest in bed. ANDERS FRICK. *J. Am. M. Ass.*, 1913, lx, 1859.

Histological examination of the mucous membrane of the stomach in ulcer and cancer of the stomach. HEYROVSKY. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 359. [391]

The etiological relationship between ulcer and cancer of the stomach. G. D. HEAD. *J.-Lancet*, 1913, xxxiii, 301.

The relations between carcinoma and peptic ulcer of the upper digestive tract. GRÜBER. *Ztschr. f. Krebsforsch.*, 1913, xiii. [391]

Ulcer of the stomach. SAM C. SLOCUM. *Med. Sentinel*, 1913, xxi, 967.

Round ulcer of the stomach. CRÄMER. *Ztschr. f. ärztl. Fortbild.*, 1913, x, 333.

The perforated gastric ulcer. SEIDEL. *Zentralbl. f. Chir.*, 1913, xl, 910. [391]

Perforating ulcers of the stomach and duodenum. J. MORLEY. *Practitioner*, Lond., 1913, xc, 997.

A report of six cases of acute perforating ulcer of the stomach. G. M. CUSHING. *J. Am. Inst. Homœop.*, 1913, v, 1253.

An extremely rare case of perigastric hæmatoma as a secondary symptom of perforation of gastric ulcers. MEINERT. *Arch. f. Verdauungskrankh.*, Berl., 1913, xix, No. 3.

Results obtained with the internal treatment of ulcer of the stomach, or of the duodenum, associated with congestive insufficiency. K. PETRÉN, K. LEWENHAGEN and J. THORLING. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 256.

The administration of ox bile in the treatment of hyperacidity and of gastric and duodenal ulcer. F. W. PALFREY. *Am. J. M. Sc.*, 1913, cxlv, 796. [391]

Methods of diagnosis in gastric cancer. J. M. FORTESCUE-BRICKDALE. *Bristol Med.-Chir. J.*, 1913, xxxi, 108.

Gastric achylia and its value for the diagnosis of cancer. SCHORLEMMER. *Arch. f. Verdauungskrankh.*, Berl., 1913, xix, No. 3.

A contribution to the surgery of gastric carcinoma; a report of 612 cases observed by Prof. Wolfier between 1895 and 1911. ALTSCHUL. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 421.

Palliative operations for the relief of incurable carcinoma of the stomach. W. J. MAYO. *St. Paul M. J.*, 1913, xv, 269. [392]

Myomata of the stomach, with report of a case terminating fatally by hæmorrhage. C. B. FARR and ROBT. A. GLENN. *N. Y. M. J.*, 1913, xcvi, 26.

Painful occlusion in a bilocular stomach. CLÉMENT. *Marseille méd.*, 1913, iv, 248. [392]

A case of bilocular stomach, diagnosed by means of radiology and operated by the method of gastro-anastomosis. VIGNARD. *Arch. prov. de chir.*, Par., 1913, xxii, No. 4.

Constipation, headaches, and other constitutional states in relation to displacements of the stomach and colon. CHAS. A. L. REED. *Ohio St. M. J.*, 1913, ix, 265.

Gastrocolic fistula, with clinical and röntgenological findings. RUDOLF NEUMANN. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 398.

Operative stenosis of gastric fistulæ by means of transplantation of fasciæ. HACKER. *Zentralbl. f. Chir.*, 1913, xl, No. 22.

Technique of the suture in gastrostomy after Witzel. KRJUKOW. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Anterior gastro-enterostomy. D. C. BALFOUR. *Ann. Surg.*, Phila., 1913, lvii, 902. [392]

Resection of the stomach. ALFRED PERS. *Deutsche med. Wchnschr.*, 1913, xxxix, 1143.

The technique of resection of the stomach and large intestine. GELINSKY. *Zentralbl. f. Chir.*, 1913, xl, 713.

Simultaneous resection of the stomach and transverse colon. M. GOULLIQUO. *Lyon chir.*, 1913, ix, 473. [393]

Exclusion of the pylorus by constrictive measures. BAGGIO. *Clin. chir.*, 1913, xxi, No. 5.

Exclusion of the pylorus by means of a detached band of aponeurotic fascia or tendon. NASSELLI. *Clin. chir.*, Milano, 1913, xxi, No. 5.

Lacing and closing of the pylorus with omentum. MOMBURG. *Deutsche med. Wchnschr.*, 1913, xxix, 1096. [393]

The vena præpylorica. SARMIENTO. *Rev. Soc. méd. argent*, 1913, xxi, 208.

Duodenal ulcer. HAENEL. *Zentralbl. f. Chir.*, 1913, xl, 912. [393]

A case of duodenal ulcer. YAGUE. *Rev. ibero-amer. de cienc. med.*, Madrid, 1913, xxix, No. 105.

The positive diagnosis of duodenal ulcer by means of the Röntgen ray. GEORGE W. ARIAL and ISAAC GERBER. *Am. Quart. Röntgen.*, 1913, iv, 187.

Duodenal ulcer of the hæmorrhagic form. CASTAIGNE. *Paris méd.*, 1913, viii, No. 24.

Ulcer of the duodenum and cholelithiasis. OETTINGER. *Paris méd.*, 1913, No. 27.

New instruments for the duodenum and small intestine. MAX EINHORN. *Med. Rec.*, 1913, lxxxiii, 1119.

Duodeno-jejunal hernia in nurslings. E. VOGT. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 817.

Radical operation for post-operative peptic ulcer of the jejunum. HABERER. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Simple ulcers of the jejuno-ileum. CADE, ROUBIER and MARTIN. *Progrès méd.*, Par., 1913, xlv, No. 24.

Gall-stones producing pyloric and jejunal obstruction. W. WAYNE BABCOCK. *N. Y. M. J.*, 1913, xcvi, 1169.

Accidents and technique of jejunostomy. BÉRARD and ALAMARTINE. *Rev. de chir.*, 1913, xlvii, 660. [393]

A new method of registering intestinal action. TRENDLENBURG. *Ztschr. f. Biol.*, 1913, lxi, 67.

Intestinal invagination. VACCARI. *Policlin.*, Roma., 1913, xx, No. 6.

The etiology of intestinal invagination. TREPLIN. *München. med. Wchnschr.*, 1913, lx, 1204.

Two cases of intestinal invagination attributable to rare causes. HOHMEIER. *Med. Klin.*, 1913, ix, No. 23.

Intestinal invagination in a child and its medico-surgical treatment. SAVARIAUD. *Clinique*, Par., 1913, viii, No. 25.

Intestinal occlusion by volvulus in a herniary sac. MARANGONI. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, No. 70.

X-ray diagnosis of stenosis and ileus of the small intestine. STIERLIN. *Med. Klin.*, 1913, ix, No. 25.

Post-operative ileus. SCHUBERT. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxviii, No. 2.

Gall-stone ileus; with a report of two cases and two methods of opening the intestine. J. S. BROWN. *Surg., Gynec. & Obst.*, 1913, xvi, 709.

Acute intestinal occlusion by a gall-stone; operation; recovery. DELAGENIÈRE. *Arch. méd. d'Angers*, 1913, xvii, No. 6.

A case of intestinal obstruction by gall-stone. G. SCHWYZER. *J.-Lancet*, 1913, xxxiii, 311.

Compression of the small intestine by the spleen and its complications. GHEORGHIN. *Gaz. med.*, Bucuresci, 1913, ii, No. 20.

False intestinal diverticulum and its clinical significance. P. REICHEL. *Zentralbl. f. Chir.*, 1913, xl, 913.

Operative technique in intussusception. S. C. BEEDE. *Am. J. Surg.*, 1913, xxvii, 208.

Classification, etiology, pathology, symptoms, diagnosis and treatment of intestinal tuberculosis. S. G. GANT. *Post-Graduate*, 1913, xxviii, 517.

Tuberculous stenosis of the small intestine. GRÉGOIRE. *Paris méd.*, 1913, No. 27.

Intestinal and pulmonary tuberculosis in a patient who had been gastrectomized for cancer. ROUBIER and GOYET. *Lyon méd.*, 1913, cxx, No. 22.

Volvulus of the cæcum, ascending colon and initial portion of the transverse colon; death from intestinal hæmorrhage. VIGUIER. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 932.

Incompetency of the ileocæcal valve; disorders arising from this condition and their treatment. JOHN H. KELLOGG. *Med. Rec.*, 1913, lxxxiii, 1105. [394]

Carcinoma of the cæcum. JENCKEL. *München. med. Wchnschr.*, 1913, lx, 1515.

Tuberculous hypertrophy of the cæcum. MONZARDO. *Riforma med.*, 1913, xxix, No. 22.

Primary typhlitis. FRANZ OBÁL. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 201. [395]

Pathology and therapy of perityphlitis (appendicitis). SONNENBURG. *Leipzig: Vogel*, 1913. [395]

Membranous pericolicitis (Jackson's membrane) and Lane's kink. CHAS. RYAN. *Proctologist*, 1913, vii, 75.

Resection of the ileocæcum because of invagination by a submucous lipoma. KARL ANDRÉE. *Beitr. z. klin. Chir.*, 1913, lxxx, 115.

The "Y" cæco-sigmoidostomy. LARDENNOIS and OKINCZYC. *J. de chir.*, 1913, x, 538. [395]

Hyper-acid gastropathy of appendicular origin. SANTE SOLIERI. *Rev. osp.*, Roma, 1913, iii, No. 10.

The origin of inflammations in the appendix on the basis of bacteriological and experimental evidence. HEILE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 345. [397]

The value currently attributed to examination of the blood in appendicitis and in progressive appendicular peritonitis. WALTER SCHULTZE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 61.

Chronic appendicitis. ADRON. *Arch. f. Verdauungs-krankh.*, Berl., 1913, xix, No. 3.

Scoliosis and chronic appendicitis. MAYET. *J. d. praticiens*, Par., 1913, xxvii, No. 24.

The diagnosis and treatment of acute appendicitis. EDWIN WALKER. *Lancet-Clin.*, 1913, cix, 629.

Treatment of the crisis of acute appendicitis. SCHWARTZ. *Paris méd.*, 1913, No. 29.

Appendicitis associated with abscess of the cæcal wall. 2. Galactorrhœa and amenorrhœa. BILSTED. *Ugesk. f. Læger*, Kjøbenhavn., 1913, lxxv, No. 26.

Appendicitis operated within thirty hours after its incipency. DELASSUS. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 23.

A case of herniary appendicitis. FOISY. *Arch. méd.-chir. de Province*, Poitiers, 1913, viii, No. 5.

The appendix and tuberculosis. BÉRARD and ALAMARTINE. *Lyon chir.*, 1913, ix, No. 6.

A case of appendix abscess. S. R. ROSS. *Med. Press & Circ.*, 1913, xcv, 663.

A case of associated recent elastic incarceration and gangrene of the vermiform appendix and an intestinal flexure. ARTHUR WAGNER. *Zentralbl. f. Chir.*, 1913, xl, 902.

Carcinoma and carcinoïd of the appendix. FRANZ ALFONS ROGG. *Ztschr. f. Krebsforsch.*, 1913, xiii, 12.

Cylindrical cell carcinoma of the vermiform appendix. EDUARD MILOSLAVICH. *Frankf. Ztschr. f. Path.*, Wiesb., 1913, xiii, 138.

Diverticuli of the appendix. TEKHOIROFF. *Vrach. Gaz.*, St. Petersburg., 1913, xx, No. 18.

Physiological pathology of the large intestine, especially considered from the surgical point of view. HUSTIN. *J. méd. de Brux.*, 1913, xviii, No. 24.

The surgical colon. A. L. BLESSE. *Proctologist*, 1913, vii, 57.

Anatomical consideration of ligamentous formations about the proximal end of the large intestine; ligamentum varioforme. M. M. RJESANOFF. *Chirurgia*, 1913, xxxiii, 126. [397]

Acquired diverticuli of the large intestine and their rôle in pathology. CADE, MARTIN and MOURGUES. *Paris méd.*, 1913, No. 27.

Colic stasis caused by deformities of the colon; symptomatic typhlectasis; surgical treatment. LARDENNOIS. *Presse méd.*, Par., 1913, xxi, No. 47.

Chronic intestinal stasis. W. A. LANE. *Surg., Gynec. & Obst.*, 1913, xvi, 600.

Intestinal ptosis producing intestinal stasis from the orthopedic viewpoint. ROBERT CAROTHERS. *Lancet-Clin.*, 1913, cix, 654.

Orthopedic principles in the treatment of abdominal visceroptosis and chronic intestinal stasis. GOLDTHWAIT. *Surg., Gynec. & Obst.*, 1913, xvi, 587. [397]

Chronic constipation; its surgical treatment. PERFOUX. *Arch. méd.-chir. de Province*, Poitiers, 1913, viii, No. 5.

The operative treatment of severe obstipation. SCHMIEDEN. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

The initial phases of cancer of the large intestine. MATHIEU. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 60.

Abdominal incisions and intestinal anastomosis in the treatment of carcinoma of the colon. ERNEST MAYLARD. *Glasgow M. J.*, 1913, lxxix, 401. [398]

Gas cysts of the intestine. PERCY R. TURNURE. *Ann. Surg.*, Phila., 1913, lviii, 811. [398]

The value of complete physiological rest of the large bowel in the treatment of certain ulcerative and obstructive lesions of this organ, with description of operative technique and report of cases. JOHN YOUNG BROWN. Surg., Gynec. & Obst., 1913, xvi, 610. [399]

X-ray diagnosis of ulcerous colitis. KIENBOCK. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 3.

Ulcerative colitis, due to a flagellate parasite (the intestinal *Lamblia*); perforation, then an intestinal occlusion. FAIRISE and JACQUOT. Arch. d. mal. de l'appareil digest. et de la nutr., Par., 1913, vii, No. 6.

Colitis chronica gravis. T. ROSENHEIM. Deutsche med. Wchnschr., 1913, xxxix, 998. [399]

Hirschsprung's disease. MEYER. Med. Klin., 1913, ix, No. 24.

Report of a case of faecal tumor associated with Hirschsprung's disease. GRAHAM. Tr. Am. Proctol. Soc., 1913, June. [400]

Megacolon. GARCIA. Argentina med., Buenos Aires, 1913, xi, No. 23.

Late conditions after exclusion of the colon by means of ileosigmoidostomy. VON BECK. Beitr. z. klin. Chir., 1913, lxxxiv, 338. [400]

Dilated and mobile sigmoid colon. KATZ. Terap. Obozrenie, Odessa, 1913, vi, No. 9.

Diverticulitis of the sigmoid. ARTHUR D. DUNN. Proctologist, 1913, vii, 66.

The beginning of the atypical neo-formations in the rectum and the sigmoid flexure. LIBENSKY. Ztschr. f. klin. Med., 1913, lxxvii, 355. [401]

Carcinoma of the sigmoid flexure the size of a fist. JENCKEL. München. med. Wchnschr., 1913, lx, 1515.

Cancer of the pelvic colon. MATHIEU. Gaz. d. hôp., Par., 1913, lxxxvi, No. 66.

Dysenteric rectitis and chlorhydrate of emetin. VALENCE. Bull. méd., Par., 1913, xxvii, No. 49.

Treatment of amebic dysentery with emetin. G. BAERMANN and H. HEINEMANN. München. med. Wchnschr., 1913, lx, 1132. [401]

Polypus of the rectum of at least thirty years' standing. GUIBE. Bull. et mém. Soc. anat. de Par., 1913, lxxxviii, 192.

Rectal prolapse treated by colopexy and peri-anal wiring; on the coexistence of rectal and genital prolapse; on hysterocolopexy. R. PROUST. Bull. et mem. Soc. de chir. de Par., 1913, xxxix, 637. [401]

Rectal section for pelvic abscess in men. MACLAREN. J.-Lancet, 1913, xxxiii, 254. [401]

Amputation of the rectum under exclusion of the pelvic colon. KELLING. Zentralbl. f. Chir., 1913, xl, No. 24.

A modern operation for rectal fistula. O. R. VON BONNEWITZ. J. Am. Inst. Homœop., 1913, v, 1258.

Two cases of ano-rectal malformation. MÜLLER. Lyon chir., 1913, ix, No. 6.

Anal imperforations. KIRMISSON. J. d. praticiens, Par., 1913, xxvii, No. 25.

Autoplasty with flaps of fat in anal fistula. DELOIRE. Bull. et mem. Soc. de chir. de Par., 1913, xxxix, 889. [402]

A method of operating on fistula without cutting muscular tissue. BARNES. Tr. Am. Proctol. Soc., 1913, June. [402]

Diagnosis of hæmorrhoids and the rectal sensation. SCHWARTZ. Paris méd., 1913, No. 26.

A further consideration of Sir Charles Ball's operation for internal hæmorrhoids. ZOBEL. Tr. Am. Proctol. Soc., 1913, June. [402]

Internal hæmorrhoids. CHAS. J. DRUBECK. Merck's Arch., 1913, xv, 171.

Sphincteric atrophy; causes, consequences and treatment. JACKSON. Tr. Am. Proctol. Soc., 1913, June.

Further observations on pruritis ani; its probable etiologic factor; results of treatment. MURRAY. Tr. Am. Proctol. Soc., 1913, June. [402]

The significance of symptoms of pain in the diagnosis of diseases of the digestive apparatus. REJCHMAN. Med. i. kron. lek., 1913, xlviii, Nos. 23 and 24.

Radiology of the digestive apparatus in 1912. GLÉNARD. Arch. d. mal. de l'appareil digest. et de la nutr., Par., 1913, vii, No. 6.

Generalization of melanotic tumors of the digestive tract. SAVY and BONNET. Arch. d. mal. de l'appareil digest. et de la nutr., Par., 1913, vii, No. 5.

Early diagnosis of carcinoma of the digestive tract. SCHÜTZ. Wien. klin. Wchnschr., 1913, xxvi, No. 26.

Experimental contribution on the circular repair of the intestinal tract by the employment of skin. K. K. WEDENSKI. Chir. Arch. Vellaminova, St. Petersburg., 1913, xxix, 263.

Reply to Hohlbaum's article concerning the question of iodization in operations on the gastro-intestinal tract. E. L. FIEBER. Zentralbl. f. Chir., 1913, xl, 720.

Liver, Pancreas, and Spleen

Functional examination of the liver. ISAAC. Berl. klin. Wchnschr., 1913, l, No. 25.

Retardation of the pulse in traumatism of the liver. KIRCHENBERGER. Wien. klin. Wchnschr., 1913, lxiii, No. 25.

Hæmostatic effect of muscle tissue in injuries of the liver. OPOKIN and SCHLAMOFF. Arb. a. d. chir. Klin. d. Prof. S. Fedoroff a. d. Milit. med. Akad., St. Petersburg., 1913, vii, 91. [403]

Passive congestion of the liver caused by hepatic colic. CASTAIGNE. Bull. méd., Par., 1913, xxvii, No. 45.

Casuistic and experimental contribution on the rupture of the liver and the bile-ducts. O. ORTH. Arch. f. klin. Chir., 1913, ci, 369.

Solitary cysts of the liver. HENRY NORRIS. Ann. Surg., Phila., 1913, lvii, 805. [404]

Atavistic origin of abscesses of the liver. CLARA REINIGER. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, 103.

Abscess of the liver presenting an abnormal symptomatology. GULLON. Clinique, Par., 1913, viii, No. 23.

A series of twenty personal cases of abscesses of the liver in tropical countries. PERVES and OUDARD. Arch. de méd. et de pharm. nav., Par., 1913, xcix, No. 5.

Carcinoma of the liver in an Australian aboriginal. THOMAS BANCROFT and B. CLELAND. Australas. M. Gaz., 1913, 465.

A new method for resection of the liver, with employment of free transplantation of fascia. KORNEW and SCHAACK. Zentralbl. f. Chir., 1913, xl, No. 24.

Radical operation on account of alveolar echinococcus of the liver. W. M. MYSCH. Chir. Arch. Vellaminova, St. Petersburg., 1913, xxix, 175.

The origin of gall-stone. A. BACMEISTER. Ergebn. d. inn. Med. u. Kinderh., 1913, xi, 1.

Pathogenesis of biliary lithiasis. FLANDIN. Arch. d. mal. de l'appareil digest. et de la nutr., Par., 1913, vii, No. 5.

A case of cholelithiasis; expulsion of the stone by vomiting. UBEDA and SARACHAGA. Rev. de med. y cir. pract., Madrid, 1913, xxxvii, No. 1268.

Cholelithiasis and cholecystitis during childhood and its treatment. KHAUTZ. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, 545. [404]

Cholecystectomy in cholelithiasis; indications and results. G. BACHY. Thèse de doct., Par., 1913. [405]

Anatomical, pathological and clinical study of a case of, cholecystitis. Poddighe. Riforma med., 1913, xxix, No. 25.

Suprapubic fistula after post-typhoid suppurative cholecystitis; cholecystectomy; recovery with persistency of the bacilli in the stools. JACOB. Bull. et mem. Soc. de chir. de Par., 1913, xxxix, 879. [405]

Formation of an artificial choledochus by means of a drainage tube. FRITZ CAHEN. Deutsche Ztschr. f. Chir., 1913, cxii, 331.

The employment of the omentum for hæmostasis in extirpation of the gall-bladder. L. STUCKEY. Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh., St. Petersburg, 1913, xxii, 43. [405]

Inhibitive action of bile on bacillus coli. E. O. JORDAN. J. Infect. Dis., 1913, xii, No. 3. [405]

Primary carcinoma of the ampulla of Vater. ROGER and LAPEYRE. Arch. d. mal. de l'appareil digest. et de la nutr., Par., 1913, vii, No. 5.

Benign tumors of the bile-ducts. SAVY, BONNET and MARTIN. Lyon chir., 1913, ix, No. 6.

Typhoid infection of the bile-ducts in aplasia of the gall-bladder. STEFAN ZARZYCKI. Wien. klin. Wchnschr., 1913, xxvi, 798.

Ascariasis of the bile-ducts. LENORMANT. Presse méd., Par., 1913, xxi, No. 49.

Diagnosis and treatment of affections of the pancreas. ALBERT WOLFF. Berl. allg. med. Verl.-Anat., 1913. [405]

Affections of the pancreas and their treatment. SOHNHEIM. Pract. Vrach, St. Petersburg, 1913, xii, Nos. 18 and 20.

Sub-acute hæmorrhagic pancreatitis; intervention; cure. VINCENT and MAURY. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 10.

Three cases of acute pancreatitis. KOZLOVSKY. Russk. Vrach, St. Petersburg, 1913, xii, No. 21.

Diagnosis and treatment of acute pancreatitis. VON REYHER. St. Petersburg. med. Ztschr., 1913, xxxviii, No. 11.

Pancreatic cysts. R. C. BRYAN. Va. M. Semi-Month., 1913, xviii, 114.

Effects of ligature of the pancreatic canal in the rabbit. WATERMANN. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 22.

A case of free transplantation of the omentum in a stab wound of the spleen. LANGE. Verhandl. d. wiss. Ver. d.

Ärzte. d. städt. Obuchow-Krkh., St. Petersburg, 1913, xxii, 31. [406]

The hæmostatic action of the adipose tissue in wounds of the abdominal viscera. POLIÉNOFF and LADIJUNE. Vrach. Gaz., St. Petersburg, 1913, xx, No. 21.

Giant tumor of the spleen. FRIEDRICH. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, 115.

Contribution to the knowledge of Banti's disease. GRUTZNER. Beitr. z. klin. Chir., 1913, lxxxv, 131.

Banti's disease in childhood; two cases of the disease in earliest infancy. D'ESPINE. Arch. f. Kinderh., 1913, lx-lxi, May.

A case of Banti's disease of luetic origin. URRUTIA. Rev. clin. de Madrid, 1913, ix, 329.

Modern surgery of the spleen. F. MICHELSSON. Ergebn. d. Chir. u. Orthop., 1913, vi, 480. [406]

Splenectomy in malarial affection of the spleen. KOPYLOW. Arch. f. klin. Chir., 1913, ci, No. 3.

Clinical observations concerning twenty-seven cases of splenectomy. H. Z. GIFFIN. Am. J. M. Sc., 1913, cxlv, 781. [407]

Extirpation of the spleen and the left kidney because of trauma. R. MÜHSAM. Deutsche med. Wchnschr., 1913, xxxix, 1044.

The effect of ablation of the spleen on nutrition. RICHET. J. de physiol. et de pathol. gén., Par., 1913, xv, No. 3.

Miscellaneous

Situs viscerum inversus totalis. C. ZENONI. Osp. mag., Milano, 1913, i, 236.

A case of transverse position of the viscera. JONKERS. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 21.

Abdominal pain. GEO. J. WEITZ. J. Mo. St. M. Ass., 1913, ix, 406.

Abdominal pain areas. DESCOMPS and BROUSSE. Paris méd., 1913, No. 26.

Abdominal diagnosis. RATTERMANN. Lancet-Clin., 1913, cix, 676.

Ten years of abdominal surgery. DOCQ. Ann. de la policlin. centrale de Brux., 1913, xiii, No. 4.

SURGERY OF THE EXTREMITIES

Diseases of Bones, Joints, Muscles, Tendons— General Conditions Commonly Found in the Extremities

Clinical and experimental researches on bone formation. J. KOGA. Kyoto-Igaku-Zossi, 1913, ix, Nos. 2 and 3.

Anatomical findings in imperfect osteogenesis. KARDAMATIS. Virchow's Arch. f. path. Anat. u. Physiol. u. f. klin. Med., 1913, cxii, No. 3.

Bone and joint lesions and their treatment. H. G. TYMMS. Australas. Med. Gaz., 1913, xxxiii, 615.

Action of the X-ray on the development of callus; comparative study of radiographic and microscopic aspects of callus. CLUZET and DUBREUIL. J. de physiol. et de pathol. gen., Par., 1913, xv, 327. [408]

Köhler's malady of the navicular bone of the foot in children is not a fracture. A. KÖHLER. Arch. f. klin. Chir., 1913, ci, 560.

Röntgen-ray findings in epicondylitis of the humerus. BLECHER. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, 239.

Osteomyelitis due to mixed infections. HAMANT and PIGACHE. Gaz. d. hôp., Par., 1913, lxxxvi, No. 71.

Acute osteomyelitis and osteoplastic surgery in childhood; a study based on the complete material of the Kaiser-und-Kaiserin-Friedrich Hospital for Children for the period of its existence, 1890-1912. WACHSNER. Arch. f. Kinderh., 1913, lx-lxi, May.

Spontaneous fractures in osteomyelitis. ATHANESESCO. J. de chir. de Bucarest, 1913, i, No. 1.

The clinical picture of fibrous osteitis. THERSTAPPEN. München. med. Wchnschr., 1913, lx, No. 25.

Deforming osteochondritis in youth. PERTHES. Arch. f. klin. Chir., 1913, ci, No. 3.

Secondary hyperplastic porotic osteoperiostitis. E. GRAFE and P. SCHNEIDER. Beitr. z. klin. Anat. u. z. allg. Path., 1913, lvi, 231.

Experimental syphilitic periostitis associated with bone caries. VANZETTI. Gior. d. r. Accad. di med. di Torino, 1913, lxxvi, Nos. 1-2.

A case of "syphilitic periostitis" cured by salicylates. E. H. GOODMAN. Boston M. & S. J., 1913, clxviii, 927.

The relation of trauma to bone tuberculosis. H. A. WILSON and R. C. ROSENBERGER. N. Y. M. J., 1913, cxvii, 1222.

- Treatment of tubercular hip disease. ARTHUR STEINDLER. Iowa M. J., 1913, xix, 610.
- The use of tuberculin in osseous tuberculosis in children. MARCHARD. Rev. méd. de la Suisse romande, 1913, xxxii, 333. [408]
- Treatment of surgical tuberculosis by means of light rays. OSKAR VULPIUS. München. med. Wchnschr., 1913, lx, 1079. [408]
- Heliotherapeutic treatment of surgical tuberculosis. WITTEK. Wien. klin. Wchnschr., 1913, xxvi, No. 26.
- Ehrlich's diazo-reaction in surgical tuberculosis. ROSATI. Riforma med., 1913, xxix, No. 23.
- New points of view in the diagnosis and therapy of surgical tuberculosis. FRITZ KÖNIG. Med. Klin., 1913, ix, 939.
- A case of acute bone atrophy. MÜLLER. Deutsche mil.-ärztl. Ztschr., Berl., 1913, xlii, 387. [409]
- Exostoses of the calcaneum. BÄHR. Arch. f. Orthop. u. Mechanoth. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- Solitary rachitic exostoses in genu valgum. WIEMERS. Arch. f. Orthop., Mechanoth. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- The multiple brown tumors found in osteomalacia. MOLINEUS. Arch. f. klin. Chir., 1913, ci, 333. [409]
- The causes of osseous cysts. PEREZ. Policlin., Roma, 1913, xx, No. 6.
- Cystic tumor of the head of the femur. P. DOMINGO. Rev. de l. Hosp., Montevideo, 1913, vi, 3. [409]
- Cystic tumor of the head of the femur. PRAT. de l. Hosp., Montevideo, 1913, vi, 3.
- Voluminous chondroma of the internal condyle of the left femur. MASINI. Sud méd., Marseille, 1913, xlv, No. 1961.
- Diseases of joints and bone marrow. L. W. ELY. Am. J. Surg., 1913, xxvii, 210.
- Coxalgic attacks in infancy. FREIDLANDER. Wien. klin. Wchnschr., 1913, xxvi, No. 25.
- Autogenous vaccines in the treatment of chronic joint affections. BASIL HUGHES. Brit. M. J., 1913, i, 2167.
- Phenol-camphor treatment of various affections of the joints, inclusive of tuberculous forms, and of cold abscesses. FRITZ POHL. Zentralbl. f. Chir., 1913, xl, 814.
- Proving the tuberculous nature of arthritic exudate by means of a specific skin reaction of tuberculous guinea pigs. RICHARD HAGEMANN. Med. Klin., 1913, ix, 947.
- Immobilization for tuberculous arthritides and heliotherapy. DOCHE. J. de méd. de Bordeaux, 1913, lxiii, No. 25.
- The treatment of gonorrhoeal arthritis. BROOKE. Hahnemann. Month., 1913, xlviii, 417. [409]
- Clinical observations on the action of gonococci vaccine in chronic gonorrhoeal arthritides. W. P. SEMENOW. Ztschr. f. Urol., 1913, vii, 349.
- Catarrhal arthritis (Volkmann) during the development of a case of Barlow's disease. WOLFF. Arch. f. Orthop., Mechanoth. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- A case of paratyphoid arthritis of the tarsus. TILGREN and TRÖLL. Wien. klin. Wchnschr., 1913, xxvi, 886.
- Purulent arthritis in sucklings and its importance in future deformities. EINAR EDBERG. Hygiea, 1913, lxxv, 203. [409]
- Operative treatment of pseudo-arthritis of the tibia. WITTEK. Arch. f. klin. Chir., 1913, ci, No. 3.
- Generalized ankylosis-producing rheumatism of tuberculous origin. MÉNARD. Gaz. d. hôp., Par., 1913, lxxxvi, No. 61.
- The mobilization of an ankylosed elbow-joint by means of periosteal transplantation. GREIFFENHAGEN. St. Petersb. med. Ztschr., 1913, xxxviii, 93. [410]
- Traumatic lesions of the meniscus of the knee. MAR-
- CHAL. Bull. de l'Ass. med. belge d. accidents du travail, 1913, ix, 241.
- Floating cartilage in the knee-joint. C. D. BROOKS. J. Mich. St. M. Soc., 1913, xii, 307.
- Further observations on the use of intra-articular silk ligaments in the paralytic joints of poliomyelitis. BARTOW and PLUMMER. Am. J. Orth. Surg., 1913, x, 449. [410]
- The treatment of tuberculous ganglia and of tuberculous affections of the tendon sheaths, muscles and subcutaneous tissues. DE QUERVAIN. Semaine méd., Par., 1913, xxxiii, No. 23.
- Sarcomas of the tendon sheaths. J. P. TOURNEUX. Rev. de chir., 1913, xlviii, 817. [411]
- The giant-celled sarcomas originating in the tendon sheaths and aponeurosis. SPIESS. Frankf. Ztschr. f. Pathol., 1913, xiii, 1. [411]
- The granulomata of tendon sheaths heretofore defined as giant cell sarcomata. FLEISSIG. Deutsche Ztschr. f. Chir., 1913, cxii, 239. [412]
- The prognosis of tendon ruptures of the crural triceps. SCHWARTZ. J. d. praticiens, Par., 1913, xxvii, No. 24.
- Myositis (myositis ossificans incipiens?). L. JACOB. München. med. Wchnschr., 1913, lx, 1089.
- A case of hæmatoma of the iliopsoas muscle. ERICH KLEEMANN. Dissertation, Breslau, 1913.
- Defects of the fingers; bone cyst; giant cell sarcoma. SIEVERS. Zentralbl. f. Chir., 1913, xl, 925.
- Differential diagnosis of contracture of the fingers. SCHUSTER. Berl. klin. Wchnschr., 1913, l, No. 25.
- Ossification of the hands in a case of total chondrodys trophy. P. REYHER. Fortschr. a. d. Geb. d. Röntgens., 1913, xx, 408.
- Pigmented xanthosarcomata of hand or foot which contain giant cells. HARTERT. Beitr. z. klin. Chir., 1913, lxxxiv, No. 3.
- Treatment of chronic ulcers of the leg with special reference to symptomatology and diagnosis. EDWARD ADAMS. Internat. J. Surg., 1913, xxvi, 222.
- Gangrene of the extremities and its treatment. EHRLICH and MARESCH. Wien. klin. Wchnschr., 1913, xxvi, No. 26.
- The determination of the limits of nutrition in gangræna pedis. WILHELM SANDROCK. Zentralbl. f. Chir., 1913, xl, 1070.
- A case of lipoma of the plantar region. GRIEWANK. Gaz. hebdom. d. sc. méd. de Bordeaux, 1913, xxxiv, No. 22.

Fractures and Dislocations

- Some observations on fractures. J. G. SHERRILL. Ky. M. J., 1913, xi, 433.
- Treatment of fractures by means of immovable apparatus. DUPUY DE FRENELLE. Progrès méd., Par., 1913, xlv, No. 25.
- The ambulatory treatment of bone fractures by means of plaster casts and distraction clamps. HACKENBRUCH. Deutsche Ztschr. f. Chir., 1913, cxii, Nos. 5-6.
- The technique of the Steinmann nail extension. D. KULENKAMPEFF. Zentralbl. f. Chir., 1913, xl, 945.
- A case of fracture of the radius. GIERTSEN. Norsk. Mag. f. Lægevidensk., Christiania, 1913, lxxiv, No. 6.
- An uncommon fracture of the distal extremity of the radius. DI PAOLA. Rev. osp., Roma, 1913, iii, No. 10.
- Isolated fracture of the navicular bone. W. M. TOTZKY. Kharkhoff. med. J., 1913, viii, 190.
- Fractures of the pelvis. JÖRGEN JENSEN. Arch. f. klin. Chir., 1913, ci, 305.
- An additional case of fracture of the floor of the acetabulum; coincident fracture of the head of the femur. P. G. SKILLEEN and HENRY K. PANCOAST. N. Y. M. J., 1913, cxvii, 1288.

Treatment of fractures of the diaphysis of the femur in children. LANDE. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 72.

An exposition of the abduction treatment of fracture of the neck of the femur. ROYAL WHITMAN. *Lancet, Lond.*, 1913, clxxxiv, 1649.

Fractures of the patella: why, when and how should we operate? SAINT-JACQUES. *J. de méd. et de chir. de Montréal*, 1913, viii, No. 4.

Fracture and dislocation of the internal meniscus of the knee; excision; cure. DEJOUANNY. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 484. [412]

Fractures of the meniscus. LEURET. *Par. chir.*, 1913, v, No. 3.

Posterior marginal fracture of the tibia and certain other complications of malleolar fractures. GRÖNDAHL. *Norsk. Mag. f. Lägevidensk.*, Christiania, 1913, lxiv, No. 6.

The treatment of fractures of the leg, especially of typical fractures of the malleolar bone, by means of a felt shoe and combination of this with Fränkel's plaster cast, which permits of walking. TOBBEN. *Zentralbl. f. Chir.*, 1913, xl, No. 25.

Fracture of the leg. PATEL. *Progrès méd.*, *Par.*, 1913, xlv, No. 22.

Fractures of the foot, with consideration of expert testimony in personal injury cases. PLATE. *Arch. f. Orthop.*, *Mechanotherapie. u. Unfallchir.*, *Wiesb.*, 1913, xii, No. 4.

The treatment of fracture of the calcaneus and injuries to the middle bones of the foot with extension. GELINSKY. *Zentralbl. f. Chir.*, 1913, xl, 809. [412]

A case of fracture of the navicular bone of the foot. J. GOYANNES. *Rev. clin. de Madrid*, 1913, ix, 222.

Complete backward dislocation of the knee; cure by continuous extension. HAPDOUIN. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 806. [412]

Narrowing of the intercondyloid fossa of the knee in total luxation of the meniscus. ERWIN SCHWARZ. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 537.

Posterior dislocations of the foot. HATRY. *Tours méd.*, 1913, 25.

Surgery of the Bones, Joints, etc.

Present status of surgery in fractures. CHAS. S. WHITE. *W. Va. M. J.*, 1913, vii, 409.

Some results of a comparative study of several methods for operative treatment of fractures. J. E. SWEET and HENRY WINSOR. *Therap. Gaz.*, 1913, xxxvii, 396.

The treatment of fractures by bolting. SCHÖNE. *Deutsche med. Wchnschr.*, 1913, xxxix, 676.

The treatment of infected and ununited fracture of the shaft of the femur. RAYMOND C. TURCK. *N. Y. M. J.*, 1913, xcvi, 26.

Old ununited fracture of anatomical neck of the femur; with suggestions for the immediate treatment of this fracture. JOHN B. MURPHY. *South. M. J.*, 1913, vi, 387. [413]

The transplantation of bone. ERNEST F. ROBINSON. *J. Mo. St. M. Ass.*, 1913, ix, 395.

The fate of bone grafts. FREDERIC J. COTTON and HALSEY B. LODER. *Surg., Gynec. & Obst.*, 1913, xvi, 701.

Free transplantation of fat in bone cavities. KLOPPER. *Beitr. z. klin. Chir.*, 1913, lxxxiv, No. 3.

Osteomyelitis with bone transplantation. FRANK A. HAMILTON. *J. Am. M. Ass.*, 1913, lx, 2030.

Osteotomy in the form of an arc. STREISZLER. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

On my procedure in osteotomy for the correction of the vicious position of the limb in obstetrical paralysis of the upper limb; effect of this correction on the function of the limb; case reports. MENDIÈRE. *Arch. prov. de chir.*, *Par.*, 1913, xxii, No. 4.

Treatment of rachitic curvatures of the tibia. G. ROSALIDO. *Rev. ibero-amer. de cienc. méd.*, *Madrid*, 1913, xxix, 240.

Remote results of arthrodesis. WEISZ. *Arch. f. Orthop.*, *Mechanotherapie. u. Unfallchir.*, *Wiesb.*, 1913, xii, No. 4.

The end results following the radical operation for knee-joint tuberculosis in the adult. MAY. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 171. [413]

Mobilization of the knee joint. PAYR. *Zentralbl. f. Chir.*, 1913, xl, 925.

Surgery of the obliquely striated musculature. KÜTTNER and LANDOIS. *Deutsche Chir.*, 1913, lxiv, 25A.

The treatment of ischaemic muscular contraction by free muscle transplantation. GÖBEL. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 218. [413]

The ulnar longitudinal incision as an incision for operations on the volar surface of the wrist and the palmar region of the hand. SAAR and SCHWAMBERGER. *Zentralbl. f. Chir.*, 1913, xl, No. 25.

The operative treatment of lame feet. MÜLLER. *Zentralbl. f. Chir.*, 1913, 812. [414]

Indications for immediate amputation in extensive traumatism of the limbs. ROBINEAU. *Clinique, Par.*, 1913, viii, No. 23.

Supracondyloid osteoplastic amputation of the femur for movable artificial legs. R. D. VEDOVA. *Révista osp.*, 1913, iii, 337. [414]

ORTHOPEDIC SURGERY

Diseases and Deformities of the Spine

False bifid spine; medullomata or medullo-embryomata. ESTOR and ÉTIENNE. *Rev. de chir.*, 1913, xxxiii, No. 6.

The so-called immobility of the spinal column. TURNER. *Russk. Vrach, St. Petersburg.*, 1913, xii, 713.

The spinal column as affected by traction and hyperextension. ALLISON and O'REILLY. *Surg., Gynec. & Obst.*, 1913, xvi, 704.

The treatment of high scolioses. CALO. *J. d. praticiens, Par.*, 1913, xxvii, No. 22.

Abbott's treatment of scoliosis. A. SCHANZ. *Berl. klin. Wchnschr.*, 1913, l, 1019.

The Abbott treatment of scoliosis. R. R. FITCH and HOWARD L. PRINCE. *N. Y. St. M. J.*, 1913, xiii, 335.

Abbott's method of treating marked scoliosis. CODET-BOISSE. *J. de méd. de Bordeaux*, 1913, xliii, No. 23.

The treatment of scoliosis by means of plaster of Paris casts after Abbott's method. ERLACHER. *München. med. Wchnschr.*, 1913, lx, No. 24.

A case of spinal tumor with scoliosis; operation. WILFRED HARRIS and BLUNDELL BANKART. *Lancet, Lond.*, 1913, clxxxiv, 4686.

The use of celluloid in the treatment of tuberculous disease of the spine. H. J. GAUVAIN. *Brit. M. J.*, 1913, i, 1200.

- The operative treatment of tuberculosis of the spine. M. S. HENDERSON. St. Paul M. J., 1913, xv, 277. [415]
- Post-traumatic spondylitis, or Kümmel's disease. CESTAN. Toulouse méd., 1913, xv, Nos. 11 and 12.
- Laminectomy in spondylitic paralysis. TILLMANN. Zentralbl. f. Chir., 1913, xl, 873.
- Enchondroma of the spine. BRUNO VALENTIN. Beitr. z. klin. Chir., 1913, lxxxv, 124.
- Traumatic atlo-axoid luxation. PELISSIER. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 9.
- Spondylolisthesis studied by means of the X-rays. WIEMERS. Arch. f. Orthop., Mechanothérap. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- A compression fracture of the fifth lumbar vertebra. M. LEWANDOWSKY. Med. Klin., Berl., 1913, ix, 1031.
- Sacralized vertebrae with report of cases. HAROLD B. THOMPSON. Northwest Med., 1913, v, 149.
- A case of exitus after lumbar puncture. W. REUSCH. Med. Klin., Berl., 1913, ix, 1041.
- A case of leucæmia, associated with tumor-like proliferation of the spinal cord leading to spontaneous fractures. PFÖRRINGER. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 4.
- Traumatic degeneration of the spinal cord: considered in connection with a case of stilus-shaped necrosis of the spinal cord following fracture of the cervical vertebrae. WIEDEMANN. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 1.
- Investigations in regard to the effect of spinal narcosis in tabetic visceral crises. BÖKELMANN. Ztschr. f. d. ges. Neurol. u. Psychiatr., 1913, xvii, 1.
- The treatment of gastric crises. FUCHS. München. med. Wchnschr., 1913, lx, No. 24.
- Congenital radio-ulnar synostosis. ALBERT MOUCHET. Ann. de méd. et chir. infant., Par., 1913, xvii, 398.
- Congenital high dystocia of the shoulder (Sprengel's deformity); the familiar type. NEUHOF. Ztschr. f. orthop. Chir., 1913, xxxi, 519.
- The treatment of rachitic deformities. BOHM. Arch. f. Kinderh., 1913, lx-lxi, May.
- The causation and treatment of deformities following anterior poliomyelitis. B. P. CAMPBELL. Edinb. M. J., 1913, x, 501. [415]
- A peculiar typical deformity of the styloid process of the ulna. A. REICHART. München. med. Wchnschr., 1913, lx, 1146.
- Madelung's deformity of the wrist. MELCHIOR. Ergebn. d. Chir. u. Orthop., 1913, vi, 649. [416]
- Madelung's deformity of the wrist (carpus valgus). BERG. Arch. f. Orthop., Mechanothérap. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- Spring-knee. PLISSON. Lyon méd., 1913, cxx, Nos. 23 and 24.
- Spring-knee. BILLET. Gaz. d. hôp., Par., 1913, lxxxvi, No. 61.
- The treatment of congenital defects of the fibula, with a contribution on operations on the epiphysis. HESSE. Deutsche Ztschr. f. Chir., 1913, cxvii, Nos. 5-6.
- Report on progress in orthopedic surgery. KUNNE. Arch. f. Orthop., Mechanothérap. u. Unfallchir., Wiesb., 1913, xii, No. 4.
- The treatment of contracted flat-foot. GEORG MÜLLER. Therap. d. Gegenw., 1913, liv, 265.
- The technique of supporting the flat foot. WOLLENBERG. Berl. klin. Wchnschr., 1913, l, 1112.
- Response to Professor Müller's criticism of my article entitled "Contributions on the pathology of hollow club-foot." GEIGES. Beitr. z. klin. Chir., 1913, lxxxiv, No. 3.
- The question as to the therapy of club-foot. S. SOFOTEROFF. Chirurgia, 1913, xxxiii, 363.
- A modified court plaster and plaster of Paris dressing in the treatment of club-foot. LEWY. München. med. Wchnschr., 1913, lx, No. 23.

Malformations and Deformities

- The open reduction of the congenital hip dislocation by an anterior incision. LUDLOFF. Am. J. Orth. Surg., 1913, x, 438. [415]

SURGERY OF THE NERVOUS SYSTEM

- A case of Recklinghausen's disease. RISPAL and LAVAU. Toulouse méd., 1913, xv, No. 10.
- Malignant cubital neuroma. NOVÉ-JOSSERAND, SAVY and MARTINI. Province méd., 1913, xxvi, 231. [416]
- Ganglion neuromata. PETERS. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 1.
- The treatment of chronic sciatica. M. J. LEWIS and W. J. TAYLOR. Therap. Gaz., 1913, xxxvii, 392.
- Sciatica and its treatment. EDW. LIVINGSTONE HUNT. Med. Rec., 1913, lxxxiii, 1153. [417]
- The treatment of sciatica. G. A. YOUNG. Interst. M. J., 1913, xx, 526.
- New data on the nature of sciatica and new methods for the surgical treatment of the affection. STOFFEL. München. med. Wchnschr., 1913, lx, No. 25.
- Action of the X-rays on the peripheral and central nervous system. U. DE LUCA. Arch. Röntgen Ray, 1913, xviii, 9. [418]
- A case of traumatic paralysis of the vagus and hypoglossal nerves. M. BERNHARDT. Neurol. Zentralbl., 1913, xxxii, 738.
- The symptomatology and surgery of the disturbances of the phrenic nerve. OEHLECKER. Zentralbl. f. Chir., 1913, xi, 852. [418]
- Volkman's ischaemic paralysis; its pathogenesis. PECHERE. Policlin., Brux., 1913, xxii, No. 10.
- Inversion of the reflex of the radial caused by traumatic lesion of the Vith cervical root. RICCA. Rev. neurol., Par., 1913, xxi, No. 11.
- The hypogastric plexus in man. LATARJET and BONNET. Lyon chir., 1913, ix, No. 6.
- Section and suture of nerves. BABINSKI. J. d. praticiens, Par., 1913, xxvii, No. 23.
- Parlavecchio's method for the suture of tendons and nerves. MESSINA. Morgagni, 1913, lv, No. 5.
- Experiences with Stoffel's operation in spastic paralysis. HOHMANN. München. med. Wchnschr., 1913, lx, No. 25.
- Plexus grafts. KATZENSTEIN. Berl. klin. Wchnschr., 1913, l, No. 25.

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

Excessive thickening of Thiersch grafts caused by a component of scarlet red (amidoaxotoluol). J. S. DAVIS. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 178.

The occurrence of cancerous changes in benign new-growths of the skin. R. L. SUTTON. *Am. J. M. Sc.*, 1913, cxlv, 819. [418]

A case of endothelial sarcoma of the skin. MARTINOTTI. *Virchow's Arch. f. path. Anat. u. Physiol. u. f. klin. Med.*, 1913, ccxii, No. 3.

Pseudo-botryomycotic fungoid angioma of the skin. E. AIEVOLI. *Gazz. internat. di med., chir.*, 1913, No. 20, 460.

Ethyl chloride in the treatment of cutaneous epithelioma. HAROLD SEIDELING. *Lancet*, Lond., 1913, clxxxiv, 1663.

Ossification of calcinated cutaneous epithelioma. S. SALTYSKOW. *Zentralbl. f. allg. Pathol. u. pathol. Anat.*, 1913, xxiv, 481.

The treatment of lupus. DREUW. *Allg. wien. med. Ztschr.*, 1913, lviii, 244.

Skin grafting. J. CULBERTSON. *J. Okla. M. Ass.*, 1913, vi, 16.

Skin grafting. CHAS. S. WHITE. *Va. M. Semi-Month.*, 1913, xxviii, 6.

Homoeoplastic and heteroplastic transplantation of skin in amphibia, with special consideration of morphosis. R. WEIGL. *Arch. f. Entwicklungsmech. d. Organismen*, 1913, xxxvi, 595.

A change in the color of the hair after the transplantation of skin. GEORG SCHÖNE. *Ztschr. f. d. ges. exp. Med.*, 1913, i, 444.

Implantation of skin instead of plastic grafts of fascia. LÖWE. *München. med. Wchnschr.*, 1913, lx, No. 24.

Transplantation of fasciæ. SCHMID. *Gynäk. Rundschau*, 1913, vii, No. 13.

Free transplantation of aponeurotic flaps. GOLDMANN. *Przegl. chir. i ginek.*, 1913, viii, No. 3.

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

Tumors. KELLING. *Zentralbl. f. Chir.*, 1913, xl, 865.

Multiple tumors. VENOULETTE. *Russk. Vrach, St. Petersburg.*, 1913, xii, No. 21.

Malignant tumors from the biologic standpoint. SYKOFF and NENJUKOFF. *Novoje v Med.*, 1913, vii, 65. [418]

A new case of malignant tumor produced by a radio-dermatitis developed experimentally in a white rat. MARIE, GLUNET and RAULOT-LAPOINTE. *Bull. de l'ass. française p. l'étude du cancer.*, 1913, v, 125.

The relation of staphylococcus aureus to malignant tumors. MARICONDA. *Policlin.*, Roma, 1913, xx, No. 24.

A plea for a more conservative treatment of malignant growths. R. H. BOGGS. *Am. Quart. Röntgen.*, 1913, iv, 199.

Cancer statistics from the city of St. Petersburg for the years 1901-1910. N. G. TOITSCHKIN. *Dissertation*, St. Petersburg, 1913.

Forms of carcinoma prevalent in Norway. MUNCH SØEGAARD. *Ztschr. f. Krebsforsch.*, 1913, xiii, 89.

The microscopic examination of fresh tissues for the diagnosis of early cancer. L. B. WILSON. *St. Paul M. J.*, 1913, xv, 274.

The significance of lues for the development of cancer. LEDERMANN. *Wien. klin. Rundschau*, 1913, No. 25.

Heam-Uro-Chrome: A new laboratory test for cancer and sarcoma; also a method of separating bile acids and pigment with the application of Torquay's test, indican being obtained if present; a preliminary report. THEODORE G. DAVIS. *Am. J. M. Sc.*, 1913, cxlv, 857.

Progress in the treatment of cancer. F. WEBER. *St. Petersburg. med. Ztschr.*, 1913, xxxviii, 112.

Surgical treatment of cancer. LIZCANO. *Siglo med.*, Madrid, 1913, No. 3104.

Results at present obtained by the surgical treatment of cancer. DUPUY and FRENELLE. *Par. chir.*, 1913, v, No. 3.

General principles of the surgical treatment of cancer. JOHN A. HARTWELL. *N. Y. M. J.*, 1913, xcvi, 26.

The need of post-surgical treatment in cancer. COLE and HOLDING. *Am. Quart. Röntgen.*, 1913, iv, 213.

An etiological factor in carcinoma and its possible influence on treatment. H. W. NOWELL. *Boston M. & S. J.*, 1913, clxviii, 838. [419]

May carcinoma heal spontaneously? A. THEILHABER. *Deutsche med. Wchnschr.*, 1913, xxxix, 1314.

The influence of the extirpation of some glands of internal secretion on the development of sarcoma in the dog. KORENTCHEWSKY. *Russk. Vrach, St. Petersburg.*, 1913, xii, No. 18.

Malignant chorio-epithelioma; an anatomical, pathological and etiological study. PROUST and BENDER. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xx, Nos. 4-5.

Chorion-epithelioma; a clinical study. POLOSSON and VIOLET. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xx, Nos. 4-5.

Myeloma. F. SYSSOJEFF. *Chir. Arch. Veljaminova*, 1913, xxix, 348. [420]

Peculiar action of foreign bodies. C. SULTAN. *München med. Wchnschr.*, 1913, lx, 1038.

Shock. A. W. COLCORD. *Internat. J. Surg.*, 1913, xxvi, 209.

The transplantation of tissue as a method of scientific and medical research. GEORG SCHÖNE. *Naturwissenschaften*, 1913, i, 489.

New researches on the independent life of tissues and organs. CARREL. *Berl. klin. Wchnschr.*, 1913, i, No. 24.

Hodgkin's disease, its etiology and pathology. E. E. WUTKE. *Iowa M. J.*, 1913, xix, 614.

The histology of small Bilharzian concretions. E. PEISTER. *Ztschr. f. Urol.*, 1913, vii, 521.

A case of trichinosis with autopsy. E. P. BERNSTEIN. *Med. Rec.*, 1913, lxxxiii, 1169.

Sporotrichosis. B. W. RHAMY and W. W. CAREY. *J. Indiana St. M. Ass.*, 1913, vi, 274.

A case of gummous sporotrichosis. BIERER. *Arch. de méd. et de pharm. mil.*, Par., 1913, lxi, No. 6.

A study of actinomycosis. F. E. MCKENTY. *Am. J. M. Sc.*, 1913, cxlv, 835.

Tetanus. A. F. KINGSLEY. *J. Mich. St. M. Soc.*, 1913, xii, 322.

Persulphate of soda in the treatment of tetanus. BRON. *Bull. méd. de l'Algérie, Alger*, 1913, xxiv, No. 9.

The rational treatment of tetanus, with a report of twenty-three cases from the Episcopal Hospital, Philadelphia. A. P. C. ASHURST and R. L. JOHN. *Am. J. M. Sc.*, 1913, cxlv, 806.

The surgery of leprosy. T. L. SANDES. *South African M. Rec.*, 1913, xi, 229.

The existence of a new gland of internal secretion. PENDE. *Riforma med.*, 1913, xxix, No. 22.

Sera, Vaccines and Ferments

A new method of serum diagnosis. W. PFEILER and G. WEBER. *Berl. tierärztl. Wchnschr.*, 1913, xxix, 449.

Diagnosis of surgical tuberculosis by the "focal" tuberculin reaction. PIERI. *Rev. osp.*, Roma, 1913, iii, No. 10.

Observation on "diagnostic" tuberculin. N. D. BARDSWELL. *Lancet*, Lond., 1913, clxxxiv, 1581.

The present status of the tuberculin tests. CHAS. B. SLADE. *Med. Rec.*, 1913, lxxxiii, 1079.

The present status of tuberculin and its therapeutic limitations. J. RITTER. *Illinois M. J.*, 1913, xxiii, 638.

The clinical, morphological, and experimental investigations in regard to local tuberculin reactions caused by local injections in tuberculosis of the skin. F. J. ROSENBAACH. *Ztschr. f. Hyg. u. Infektionskrankh.*, 1913, lxx, 539.

Experiments in regard to the nature of the tuberculin reaction. PAUL T. MÜLLER. *Ztschr. f. Immunitätsforsch.*, 1913, xviii, 185.

The treatment of surgical tuberculosis with Rosenbach's tuberculin. H. MEYER. *Beitr. z. klin. Chir.*, 1913, lxxxv, 28.

Methods of using the "Rosenbach" tuberculin. KARL DROWATSKY and ERICH ROSENBERG. *Deutsche med. Wchnschr.*, 1913, xxxix, 1241.

Further information in regard to the reaction of thermoprecipitin in tuberculosis. ANTONIO FAGINOLI. *München. med. Wchnschr.*, 1913, lx, 1480.

Comparisons of different anti-pneumococcus sera. BOEHKE and MOURIZ. *Bol. d. Inst. nac. de Higiene de Alfonso XIII*, 1913, ix, 1.

The value of the deviation of the complement after von Dungen in the diagnosis of malignant malformations. ANSELM. *Policlin.*, Roma, 1913, xx, No. 6.

Early diagnosis of carcinoma by means of the dialytic procedure after Abderhalden. LÜDKE. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 65.

Abderhalden's reaction; the human ovum and cancer. LABBE. *Gaz. méd. de Nantes*, 1913, xxxi, No. 24.

Serodiagnosis of tumors after the method of von Dungen. P. A. PETRIDIS. *München. med. Wchnschr.*, 1913, lx, 1318.

Serodiagnosis of tumors by means of the complement fixation test. HALPERN. *München. med. Wchnschr.*, 1913, lx, 914.

The derivation of the constituents of serum which influence cancerous cells. FREUND and KAMNER. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 25.

Physico-chemical researches on serum agglutination. P. SCHMIDT. *Arch. f. Hyg.*, München and Leipz., 1913, lxxx, 62.

The antitoxin treatment of tetanus. E. W. GIVEN. *Am. J. Surg.*, 1913, xxvii, 205.

Two cases of marked septicemia, cured by means of the antistreptococcic serum combined with fixation abscess. FUNCK-FRENTANO and ROULLAND. *Gynécologie*, Par., 1913, xvii, No. 4.

Serumtherapy in erysipelas. O. NEWTON. *Calif. Eclect. M. J.*, 1913, vi, 138.

Do results justify the use of phylacogens? C. R. METCALF. *Boston M. & S. J.*, 1913, clxviii, 26.

Vaccine therapy. I. E. COLGIN. *Southern M. J.*, 1913, vi, 367.

Sensitized vaccine in acute bacterial infection; results obtained in a series of cases. GORDON and OXON. *Lancet*, Lond., 1913, clxxxiv, 1795.

Observations of results from vaccination against tuberculosis. C. A. JULIAN. *Med. Rec.*, 1913, lxxxiii, 1059.

The treatment of cancerous subjects by means of vaccination. LEWIN. *Therap. d. Gegenw.*, Berl., 1913, liv, No. 6.

Principles of ferment methods; a textbook for physicians, chemists and botanists. JULIUS WOHLGEMUTH. Springer, Berl., 1913.

Studies of normal and pathological serum by Abderhalden's dialysis method. Studies of the specificity of the protective ferment. Second contribution: Studies of the serum of Basedow's disease, nephritis, and diabetes mellitus. A. E. LAMPE and L. PAPAZOLU. *München. med. Wchnschr.*, 1913, lx, 1533.

Experimental studies of the specificity of Abderhalden's proteolytic protective ferment. E. FRANK and F. ROSENTHAL. *München. med. Wchnschr.*, 1913, lx, 1425.

Immunity against pancreatitis. H. JOSEPH and J. PRINGSHEIM. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 290.

Immunity against tuberculosis by natural selection. H. W. BLÖTE. *Ztschr. f. Tuberkul.*, 1913, xx, 151.

The antitryptic action of serum in anaphylaxis. J. ANDO. *Ztschr. f. Immunitätsforsch.*, 1913, xviii, 1.

Blood

The blood in surgery. BOLOGNESI. *Clin. chir.*, Milano, 1913, xxi, No. 5.

Hæmatogenous and obstructive icterus; experimental studies by means of the Eck fistula. G. H. WHIPPLE and C. W. HOOPER. *J. Exp. M.*, 1913, xvii, 593. [420]

A rapid change of hæmoglobin to bile pigment in the circulation outside of the liver. G. H. WHIPPLE and G. W. HOOPER. *J. Exp. M.*, 1913, xvii, 612. [420]

The technique of blood analysis. E. MÜNZER. *Med. Klin.*, Berl., 1913, ix, 716.

A new chamber for counting blood cells and a criticism of the methods of counting blood cells. W. ROERDANSZ. *Pflüger's Arch. f. d. ges. Physiol.*, 1913, clii, 81.

Studies of the Armeth method for determining the neutrophile blood picture, and the neutrophile blood picture in health. AXEL VON BONSDORFF. *Beitr. z. Klin. d. Tuberkul.*, 1913, v, 319.

Observations on the inter-sexual reaction of the blood in man and new researches on the inter-sexual reactions of the blood in the horse. LE LORIER and LE COINTE. *Gynécologie*, Par., 1913, xvii, No. 4.

The combining and immunizing substances in the red blood cells. Second communication. The antigen of blood. KARL LANDSTEINER and EMIL PRASEK. *Ztschr. f. Immunitätsforsch. u. exp. Therap.*, 1913, xvii, 363.

Changes in the blood and the hæmatopoietic organs after amputations and exarticulations. SCHAAK. *Russk. Vrach*, St. Petersburg, 1913, xii, 631.

Researches on the blood serum and the cerebro-spinal fluid of epileptics. CARLO TREVISANELLO. *Zentralbl. f. Bakteriol.*, 1913, lxix, 163.

The foreign bodies enclosed in leucocytes with polymorphous nuclei during surgical affections. NACCARONE. *Riforma med.*, 1913, xxix, Nos. 22 and 23.

The influence of different large doses of radium emanation upon the blood. GUDZENT and HUGEL. *Radium in Biol. u. Heilk.*, 1913, ii, 202.

Urban factors in the chlorotic anæmia of the new-born and its preventive treatment. P. F. ARMAND-DELILLE. *Rev. mens. de gynec., d'obst. et de pediatrie*, Par., 1913, viii, 102.

Anæmia of the lower part of the body. G. F. VON SAAR. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 1.

Intravenous injection of small quantities of human blood for the treatment of severe anæmia. WEBER. *München. med. Wchnschr.*, 1913, lx, 1307. [420]

Anæmia from the standpoint of the operating surgeon. HENRY T. BYFORD. *Chicago Med. Recorder*, 1913, xxxv, 319.

The present status of the treatment of hyperæmia. EUGEN JOSEPH. *Therap. d. Gegenw.*, 1913, liv, 241.

Intraperitoneal hæmorrhage caused by isolated rupture of a branch (arteria phrenica) of the hepatic artery. A. REINHARDT. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 309.

The employment of the Momburg tube in cases of hæmorrhage. VON SAAR. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 1. [421]

Arrest of hæmorrhage and treatment of wounds with coagulin Kocher-Fonio. ANTON FONIO. *Cor.-Bl. f. Schweiz. Ärzte*, 1913, xliii, 385. [421]

The checking of internal hæmorrhage by means of intravenous injection of grape sugar. SCHREIBER. *Therap. d. Gegenw.*, 1913, liv, 195. [421]

Hæmorrhage from the axillary artery three months after trauma; ligation of the artery; false Volkmann's ischæmic paralysis. FROELICH. *Rev. méd. de l'Est.*, 1913, xlv, 294. [421]

The successful treatment of hæmophilous hæmorrhages by means of the thermocautery. R. PARREIDT. *München. med. Wchnschr.*, 1913, lx, 1150.

Thrombus. ROBERT HANSEN. *Virchow's Arch. f. pathol. Anat. u. Physiol.*, 1913, ccxiii, 65.

Thrombosis of the portal artery. F. WALCKER. *Arch. a. d. Chir. Klin. d. Prof. Oppel*, St. Petersburg., 1913, iv, 158.

A report of a case of thrombosis of the inferior vena cava. T. WILLETT and E. W. MÄCHTLE. *J. Am. M. Ass.*, 1913, lx, 1878.

Traumatic venous thrombosis in the upper extremity. BAUM. *Deutsche med. Wchnschr.*, 1913, xxxix, 997. [422]

Infusions of sugar as a prophylactic against thrombosis. FRANZ KUHN. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 90.

Thrombophlebitis of the cavernous sinus of furunculosis origin. SITZEN. *Nederl. Tijdschr. v. Geneesk.*, Amst., 1913, i, No. 25.

A case of operated embolism of the femoral artery. KEY. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 23.

Some experiments on transfusion of blood. DUBILLIER and LEBORGNE. *Écho méd. du Nord*, Lille, 1913, xvii, No. 25.

Direct transfusion of blood. GÖBELL. *München. med. Wchnschr.*, 1913, lx, 1574.

Regarding a case of direct transfusion of blood by end to end suture of the radial artery and basilic vein. JACOMET. *Bull. med.*, 1913, xxvii, 435.

The Wassermann reaction in the Johns Hopkins Hospital. R. H. MAJOR. *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 175. [422]

Blood and Lymph Vessels

Rhythmical spontaneous contractions of arteries. O. B. MEYER. *Ztschr. f. Biol.*, 1913, lxi, 275.

Investigations in regard to the automatic movements of the arteries. HERMANN FULL. *Ztschr. f. Biol.*, 1913, lxi, 287.

A case of aneurism of the anominate arteries cured by extirpation. K. IMAI. *Deutsche med. Wchnschr.*, 1913, xxxix, 1147.

Aneurism of the popliteal artery; ligature of the femoral artery at the vertex of Scarpa's triangle; recovery. MORALES PEREZ. *Rev. de med. y cir. pract.*, Madrid, 1913, xxxvii, No. 1269.

Arteriorrhaphy. O'DAY. *Northwest Med.*, 1913, v, 154. [423]

Rupture of the vena cava caused by trauma. SCHMIEDEN. *Deutsche Ztschr. f. Chir.*, 1913, cxxii, 591.

A frequent cause of varicose veins in women. QUISERNE. *Arch. méd.-chir. de Normandie*, Le Havre, 1913, iv, No. 5.

A contribution on the operative treatment of varicose veins of the lower extremities. KUZMIK. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 1.

The treatment of varicose veins by means of the circular incision. GIENITZ. *München. med. Wchnschr.*, 1913, lx, No. 23.

Vein sutures. DOBROVOLSKAIA. *Russk. Vrach*, St. Petersburg., 1913, xii, No. 18.

Two cases of vein grafting for the maintenance of a direct arterial circulation. J. H. PRINGLE. *Lancet*, Lond., 1913, clxxxiv, 1795.

Researches on transplantation of blood vessels. GIOVANNI CASTIGLIONI. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, 63.

Treatment of angiomas by means of heated air. VIGNAT. *Clinique*, Par., 1913, viii, No. 22.

The action of adrenalin upon the peripheral vessels. W. A. SWETSCHNIKOFF. *Dissertation*, St. Petersburg., 1913. [423]

The ingestion of bacteria by the subepithelial lymphatic glands in health. K. H. DIGBY. *Lancet*, Lond., 1913, clxxxiv, 4686.

Heteroplastic production of lymphoid tissue. GREGGIO. *Frankf. Ztschr. f. Path.*, Wiesb., 1913, xiii, No. 1.

Intradermal lymphatic varices in the inguino-crural region. JACOB. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 606. [424]

Tuberculosis of the lymphatics. L. H. REICHELDERFER. *Va. M. Semi-Month.*, 1913, xxviii, 6.

Hodgkin's disease; lymphogranulomatosis. LACRONIQUE. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 67.

Contributions to the knowledge of lymphangiomas. WALTHER MÜLLER. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 511.

A case of lymphosarcoma treated by radium. TURNER. *Arch. Röntgen Ray*, 1913, xvii, 418.

Lymphangioplasty: Handley's method. PARKER SYMS. *Ann. Surg.*, Phila., 1913, lvii, 785. [424]

Elephantiasis of the lower limbs. JURASZ. *Zentralbl. f. Chir.*, 1913, xl, 925.

Drainage by means of a thread according to Handley in a case of elephantiasis. BYLIN-KOLOSSOWSKY. *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krkh.*, St. Petersburg., 1913, xxii. [425]

Poisons

Bacteriæmia. W. C. K. BERLIN. *Ophth. Rec.*, 1913, xxii, 564.

Toxæmia-septicæmia, pyæmia. A. J. BURKHOLDER. *Va. M. Semi-Month.*, 1913, xviii, 120.

The occurrence of tubercle bacilli in the blood. BACMEISTER. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, 511.

A new spirochæta found in human blood. HELEN CHAMBERS. *Lancet*, Lond., 1913, clxxxiv, 4686.

Agchylostoma ceylanicum, a new human parasite. CLAYTON LANE. *Indian Med. Gaz.*, 1913, xlvi, 217.

Tetragenous septicæmia. J. BYERS and THOMAS HOUSTON. *Lancet*, Lond., 1913, clxxxiv, 4686.

The gonococcus. W. B. CHURCH. *Calif. Eclect. M. J.*, 1913, vi, 131.

Interrelations in the streptococcus group, with special reference to anaphylactic reactions. D. J. DAVIS. *J. Infect. Dis.*, 1913, xii, No. 3. [425]

A note on the behavior of the saprophytic cocci with regard to Gram's stain. I. J. KLIGLER. *J. Exp. M.*, 1913, xvii, 653.

Nitrate intoxication as a result of injections of Beck's bismuth paste. JENSEN. *München. med. Wchnschr.*, 1913, lx, No. 22.

Surgical Therapeutics

Camphorated oil in high doses in therapeutics. ARRIVAT and ROZIES. *Gaz. d. hôp., Par.*, 1913, lxxxvi, No. 66.

The effect of camphor in bacterial infection. K. E. BÖHNCKE. *Berl. klin. Wchnschr.*, 1913, l, 818.

Further experiences with carbolated camphor. CHLUMSKY. *Klin.-therap. Wchnschr.*, 1913, xx, No. 22.

Amylene carbamate—synonym aponal; a new hypnotic. S. HALLOWS. *Med. Press & Circ.*, 1913, cxlvi, 607.

Critical remarks on the hormonal treatment. BURIANEK. *Čas. lék. česk.*, Prague, 1913, lii, No. 18.

Notes on the technique of using thorium paste. L. DUNCAN BULKLEY. *Chicago Med. Recorder*, 1913, xxxv, 323.

Treatment of wounds by means of sugar and heated air douches. MONJARDINO. *Arch. med. contemp.*, 1913, xxxi, 161.

The action of collargol enemata in septic processes. WOLF. *Deutsche med. Wchnschr.*, 1913, xxxix, 944. [425]

Experiences with noviform. RUDOLF PATEK. *Deutsche med. Wchnschr.*, 1913, xxxix, 1204.

Synthetic L-suprarenin. K. L. STOLL. *Lancet-Clin.*, 1913, cix, 679.

Non-operative treatment of malignant disease. T. J. HORDER. *Clin. J.*, 1913, xlii, 145.

The non-operative treatment of malignant tumors. WERNER. *Novoje v med.*, St. Petersburg, 1913, vii, 464.

Non-surgical treatment of malignant neoplasms. WERNER. *Novje v med.*, St. Petersburg, 1913, vii, Nos. 8 and 9.

Intravenous injections of various substances in animal cancer. LEO LOEB and M. S. FLEISHER. *J. Am. M. Ass.*, 1913, lx, 1857.

Chemotherapeutic experiments on cancerous subjects with selenium-iodine-methylene-blue. BRAUNSTEIN. *Berl. klin. Wchnschr.*, 1913, l, No. 24.

The treatment of anthrax with salvarsan. MOKRZECKI. *München. med. Wchnschr.*, 1913, lx, 1089. [425]

Oil of cade in tibial ulcers. C. W. HAMLIN. *Ellingwood's Therap.*, 1913, vii, 208.

The use of mastisol on the operative field. F. HAENEL. *Zentralbl. f. Chir.*, 1913, xl, 863.

Surgical Anatomy

Form, position and changes of position of the bronchial branch in children. ENGEL. *Arch. f. Kinderh.*, 1913, lx-lxi, May.

Electrology

Radiotherapy. STRAUZ. *Med. Klin.*, 1913, ix, 876.

Modern Röntgen ray therapy; particularly surface therapy. F. M. MEYER. *Deutsche med. Wchnschr.*, 1913, xxxix, 1508.

The basis of röntgenotherapy and radium therapy. W. D. BUTCHER. *Strahlentherapie, Berl.*, 1913, ii, 396 and *Arch. Röntgen Ray, Lond.*, 1913, xviii, 16.

Physical, chemical and biological properties of thorium-X. KAHN. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

The chemical and biological effect of radio-active substances. FALTA. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

Radio-active substances and their therapeutic value. D. WALTER. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 511.

General histological changes in the tissues under the influence of radio-activity. WICKHAM. *Berl. klin. Wchnschr.*, 1913, l, No. 23.

Histological, cytological and serological examination of guinea pigs treated with X-rays. FRÄNKEL and BUDDE. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 4.

Cases which are refractory to X-rays. MEYER. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

The pain reducing influence of Röntgen and radium rays. SIMONSON. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

The normal measure of radium and the method of measuring radio-activity. STEFAN MEYER. *Strahlentherapie, Berl.*, 1913, ii, 533.

The measurement of thorium-X preparations. B. KEETMAN and M. MAYER. *Strahlentherapie, Berl.*, 1913, ii, 543.

Types of photochemical radiometers for measuring X-rays. ROBERT KIENBOCK. *Strahlentherapie, Berl.*, 1913, ii, 556.

Dosage, measurements and control of the X-ray and other agents in therapeutics. WM. B. SNOW. *Internat. J. Surg.*, 1913, xxvi, 199. [425]

Radium and mesothorium and their derivation products. BAEZA. *Med. Weekbl., Amst.*, 1913, xx, Nos. 11 and 12.

Experimental investigations on the deep action of Röntgen rays. KOLDE. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

A case of late injury caused by deep röntgenotherapy. W. DIETERICH. *Fortschr. a. d. Geb. d. Röntgenstr., Hamb.*, 1913, xx, 159.

Physical and technical principles of deep penetrating X-ray treatment. DESSAUER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [425]

A combined filter for obtaining a favorable distribution of superficial and deep rays. LEO MOSES. *Zentralbl. f. Röntgenstr., Radium u. verw. Geb.*, 1913, iv, 131.

A grating diaphragm to cut off secondary rays from the object. G. BUCKY. *Arch. Röntgen Ray, Lond.*, 1913, xviii, 6. [426]

Clinical findings on ulcers caused by X-rays. HAGER. *Strahlentherapie, Berl.*, 1913, ii, 642.

Radiotherapy of tumors. WERNER. *Strahlentherapie, Berl.*, 1913, ii, 614. [426]

A lecture on radium in the treatment of malignant disease. ROBERT KNOX. *Brit. M. J.*, 1913, i, 1196.

Cancer and its treatment by X-rays and high frequency electricity or diathermia. MÜLLER. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

The treatment of cancer by means of Röntgen rays and mesothorium. KRÖNIG and GAUSS. *Deutsche med. Wchnschr.*, 1913, xxxix, 1233.

Results of mesothorium treatment of cancer. PINKUSS. *Berl. klin. Wchnschr.*, 1913, l, No. 24.

The relation between sarcoma and myoma with respect to röntgenotherapy. MÜLLER. *Strahlentherapie, Berl.*, 1913, ii, No. 2.

Röntgenotherapy of myomata. BERDEZ. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 4.

Conservative surgery from a röntgenological standpoint. CHEVALIER JACKSON. *Am. Quart. Röntgen.*, 1913, iv, 209.

Direct combined examination of single radiograph and patient; the episcopo. W. COTTON. *Practitioner*, 1913, xc, 1006.

X-ray pictures with paper sensitive to light. LORENTZ. *Deutsche med. Wchnschr.*, 1913, xxxix, 896.

The automatic development of Röntgen ray plates. A. WEBER. München. med. Wchnschr., 1913, lx, 1264.

Hepatoptosis and X-rays. LETULLE. Presse méd., Par., 1913, xxi, No. 53.

Radiographic determination of the position of foreign bodies. GOLSTE. Russk. Vrach, St. Petersburg, 1913, xii, No. 22.

On the exact localization of foreign bodies in the human body. SCHINGAGLIA. Policlin., Roma, 1913, xx, No. 6.

Radiographic measurements of the movements of the shoulder. MIRAMOND DELLA ROQUETTE. Arch. d'électr. méd., exp. et clin., Bordeaux, 1913, xxi, No. 360.

The value of the data furnished by radiography in thoraco-abdominal affections. DELBET. J. d. praticiens, Par., 1913, xxvii, No. 25.

Decomposition of the solutions of radium and of radium emanations in the organism after their introduction into blood circulation. ENGELMANN. Med. Klin., Berl., 1913, ix, No. 25.

Fulguration after the method of Keating Hart. ROELOFS. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 21.

Clinical contributions on accidents caused by electricity. MALY. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlv, Nos. 4-5.

Heliotherapy. LYON. Clinique, Par., 1913, viii, No. 26.

Seaside heliotherapeutic treatment of surgical tuberculosis and tuberculosis of the bronchial glands. RICHARD and FELTEN. Berl. klin. Wchnschr., 1913, l, No. 23.

The employment of heliotherapy at the seaside of southern seas. ORAZIO PUPINI. Ztschr. f. Balneol., Klimatol. u. Kurort-Hyg., 1913, v, 719.

The employment of heliotherapy after interventions. AIMES. Progrès méd., Par., 1913, xlv, No. 22.

The Finsen light treatment at the London Hospital, 1900-1913. J. H. SEQUEIRA. Lancet, Lond., 1913, clxxxiv, 1655.

Military and Naval Surgery

Military surgery. G. M. BLECH. Am. J. Surg., 1913, xxvii, 224.

A singular bullet wound. HYMANS and VAN DER GOOT. Nederl. Tijdschr. v. Geneesk., Amst., 1913, i, No. 20.

The treatment of gun-shot wounds of the chest. A. L. BURNETT. Colo. Med., 1913, x, 196.

Brief remarks on gun-shot wounds of the abdomen, with report of cases. LINDSAY PETERS. J. South Car. M. Ass., 1913, ix, 141.

Bullet wounds of the liver with report of a case. H. FREUDENBERGER. Colo. Med., 1913, x, 179.

Gun-shot injuries of blood vessels. LOTSCH. Deutscher chir. Kong., 1913. [426]

Surgical Diagnosis

The importance of sciatic and lumbar neuralgia in the diagnosis of tuberculous inflammatory tumors of the pelvis. CAMERA. Policlin., Roma, 1913, xx, No. 22.

GYNECOLOGY

Uterus

Uterine affections. GUIAO. Imprensa med., Soa Paulo, 1913, xxi, No. 9.

Diseases of the uterus and the ovaries and psychoses. BOSSJ. J. akush. i jensk. boliez., St. Petersburg, 1913, xxviii, June.

A large coprolith enclosing the uterus and simulating a malignant tumor. ROMEO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, 536. [427]

Uterine cancer. W. PIERSON. North Am. J. Homoeop., 1913, xxviii, 343.

An early diagnosis of cancer of the uterus, with report of an hysterectomy in an early case. A. C. HENDRIX. Canad. J. M. & S., 1913, xxxiii, 433.

The utility of exploratory curettage for the early diagnosis of uterine cancer. SIREDEY and LEMAIRE. Ann. de gynéc. et d'obst., Par., 1913, x, May.

The utility of cystoscopic examination in cancer of the cervix of the uterus. FRANCO. Arch. ital. di ginec., Napoli, 1913, xvi, No. 5.

A case of an extended carcinoma which grew through the rear wall of the uterus and penetrated to the rectum. OPITZ. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, 403.

Recovery in a case of carcinoma of the uterus demonstrated by test-curettage. HESS. Deutsche med. Wchnschr., 1913, xxxix, 1038.

Chorio-epithelioma following hydatidiform mole and giving rise to intraperitoneal hæmorrhage from an extension in the right meso-salpinx. WILSON. Proc. Roy. Soc. Med. 1913, vi, Obst. & Gynec. Sect., 224. [427]

Adenomyositis of the uterus and of the rectum. M. RASPINI. Ginecologia, 1913, ix, 577. [427]

Contribution to the study of benign chorio-epitheliomas of the wall of the uterus and tubes. F. DAELS. Bull. de l'Acad. roy de méd. de Belg., 1913, xxvii, 175. [427]

Surgical treatment of uterine cancer. BOTIN. Rev. ibero-amer. de cienc. med., Madrid, 1913, xxix, No. 105.

Treatment of inoperable cancer of the cervix of the uterus; the present status of the question. ROZIES and ARRIVAT. Gaz. d. hôp., Par., 1913, lxxxvi, No. 70.

Complete removal of a uterine cancer by test curettage. P. PRYM. Deutsche med. Wchnschr., 1913, xxxix, 1247.

Bumm's recent results in the radical operation of uterine cancer. LASTARIA. Arch. ital. di ginec., Napoli, 1913, xvi, No. 5.

Means of improving the immediate results of the radical operation of uterine cancer by the abdominal path. DE BOVIS. Semaine méd., Par., 1913, xxxiii, No. 26.

Results of X-ray and mesothorium treatment of uterine carcinoma. E. BUMM. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [428]

Röntgen ray and mesothorium treatment of myoma and carcinoma of the uterus. A. DÖDERLEIN. Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May. [428]

A peculiarly shaped myomatous uterus. KÜSTNER. Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May. [428]

Experiences with radiotherapy of myomata and of climacteric hæmorrhages of the uterus. EDLING. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 3.

X-ray treatment of myomata and fibrosis of the uterus. HIRSCH. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, No. 4.

Partial myoma operations. FREUND. Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May. [429]

Disappearance of a uterine fibroma, with conservation of menstruation; radiotherapeutic technique. CHARLIER. Bull. et mém. Soc. de radiol. méd. de Par., 1913, v, 111.

X-ray treatment of uterine fibroids, menorrhagia and metrorrhagia. SAMUEL STERN. Am. J. Obst., N. Y., 1913, lxvii, 1133.

Pathology and treatment of uterine hæmorrhage. B. WHITEHOUSE. Practitioner, Lond., 1913, xc, 952. [429]

Clinical notes on uterine hæmorrhage. HUBERT A. ROYSTER. Southern M. J., 1913, vi, 401.

The influence of the radium emanation on uterine hæmorrhages. OPITZ. Zentralbl. f. Gynäk., 1913, xxxvii, No. 22.

The thyrogenous etiology of hæmorrhagic metropathies. E. SEHRT. München. med. Wchnschr., 1913, lx, 961. [429]

The pathology of uterine casts passed during menstruation. W. B. BELL. Surg., Gynec. & Obst., 1913, xvi, 651. [429]

The forensic significance and the treatment of menstruation accompanied by psychic disturbances. HUGO BOAS. Arch. f. Kriminalanthropol., 1913, liii, 324.

Menstrual molimina; adult cases. CHISHOLM. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 389. [430]

Disturbed menstruation in psychosis. H. HAYMANN. Ztschr. f. d. ges. Neurol. u. Psychiatr., 1913, xv, 511. [430]

So-called idiopathic dysmenorrhœa and its treatment. DALCHE. Progrès méd., Par., 1913, xlv, No. 25.

The use of the "metranoikter" in the treatment of dysmenorrhœa and sterility. P. F. WILLIAMS. N. Y. M. J., 1913, xcvi, 1190.

Dysmenorrhœa and its treatment. ALBERT BLAU. Med. Klin., 1913, ix, 653. [430]

The treatment of amenorrhœa. ZOEPFRITZ. Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May. [430]

A further consideration of the use of corpora lutea in the treatment of artificial menopause. C. A. HILL. Surg., Gynec. & Obst., 1913, xvi, 712. [431]

The treatment of endometritis. GEO. F. WARD. N. Y. M. J., 1913, xcvi, 1181. [431]

A case of uterus septus (diagnosed on the removal of the placenta). C. KÜHLMANN. Strassburg. med. Zeit., 1913, x, 177.

Inversion of the uterus, with a report of a case occurring during the puerperium and caused by a fibroid. WALTER C. JONES. Surg., Gynec. & Obst., 1913, xvi, 632. [432]

Retroflexion of the uterus. A. DONALD and W. F. SHAW. Practitioner, Lond., 1913, xc, 961. [432]

Removal of strain from the round ligaments while healing after correcting retroversion of the uterus. W. T. COUGHLIN. Surg., Gynec. & Obst. 1913, xvi, 712.

An unusual case of rupture of the uterus. ANDREWS. Proc. Roy. Soc. Med., 1913, vi, Obst. & Gynec. Sect., 272. [433]

Adnexal and Periuterine Conditions

The arrangement and distribution of the nerves in certain mammalian ovaries. ABEL and McILROY. Proc. Roy. Soc. Med., 1913, vi, Obst. & Gynec. Sect., 240. [433]

Cancerous transformation of cysts of the ovary. OULESKO-SHOGANOVA. Russk. Vrach, St. Petersburg., 1913, xii, No. 18.

Melanosarcoma of the ovary. BONDI. Wien. klin. Wchnschr., 1913, xxvi, No. 26.

Dermoid and teratoma. ROSENSTEIN. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, 109.

Pseudomyxoma peritonei with involvement of the ovaries and appendix. B. RATHE. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 322. [433]

The rôle of ovarian disease in the production of sterility. GEO. W. KOSMAK. Bull. Lying-In Hosp., 1913, ix, 107.

The grafting of human ovaries. T. TUFFIER. J. de chir., 1913, x, 529. [433]

Transplantation of ovaries into foreign species. W. HARMS. Arch. f. Entwicklungsmech. d. Organismen, 1913, xxv, 748. [434]

Ovarian surgery during the year 1912. DANIEL. J. de chir. de Bucarest, 1913, i, No. 1.

The effect of castration on the hypophysis. RÖSSLE. München. med. Wchnschr., 1913, lx, 952. [434]

A case of chorio-epithelioma of the Fallopian tube following extra-uterine gestation. COPE and KETTLE. Proc. Roy. Soc. Med., 1913, vi, Obst. & Gynec. Sect., 247. [434]

Indications for operation in cystic adnexitis. P. LIZCANO. Siglo med., 1913, lx, 214.

A clinical lecture on salpingo-oöphoritis. T. G. STEVENS. Clin. J., 1913, xlii, 129.

Surgical treatment of pyosalpinx. S. ANDERSON. Ky. M. J., 1913, xi, 510.

Abdominal hysterectomy by anterior amputation in bilateral pyosalpinx. BARNSBY. Arch. mens. d'obst. et de gynec., Par., 1913, ii, No. 5.

Tuberculosis of the tube. JAYLE. Presse méd., Par., 1913, xxi, No. 51.

Fibrosarcoma of the broad ligament. J. JACOB. Zentralbl. f. Gynäk., 1913, xxxvii, 931.

The treatment of pus within the female pelvis. JAS. C. WOOD. N. Eng. M. Gaz., 1913, xlviii, 287.

Massive intraperitoneal hæmatoma of the pelvis. JAS. HARRAR. Bull. Lying-In Hosp., 1913, ix, 125.

External Genitalia

The surgical treatment of primary carcinoma of the vagina. POZSONYI. Budapesti orvosok ujsag, Sebeszet, 1913, ii, 16. [435]

Traumatic rupture of the vagina and resultant prolapse of the small intestine. F. VOGEL. München. med. Wchnschr., 1913, lx, 1326.

Fracture of the pelvis and laceration of the vagina. ADOLPH HOFFMANN. Deutsche med. Wchnschr., 1913, xxxix, 1285.

Incontinence of urine and vaginal prolapse. MURET. Rev. de gynec. et de chir. abdom., Par., 1913, xx, Nos. 4 and 5.

Creation of a vagina in case of the congenital absence of this canal by graft of a flexure of the intestine; operative technique. QUÉNU and SCHWARTZ. Rev. de chir., Par., 1913, xxxiii, No. 6.

Plastic repair of the vagina in the congenital absence of the organ. ALBRECHT. Deutsche Ztschr. f. Chir., 1913, cxix, Nos. 5 and 6.

The importance and value of the inverted T-incision in vaginal surgery. SAMUEL W. BANDLER. Med. Rec., 1913, lxxxiii, 1164. [435]

Bacilli of the vagina and internal infection. BONDY. Ztschr. f. Geburtsh. u. Gynäk., 1913, lxxviii, No. 2.

Leucorrhœa and gonorrhœa. C. D. R. KIRK. Ellingwood's Therap., 1913, vii, 207.

Practical considerations on vaginal injections in gynecology. DALCHE. Clinique, Par., 1913, viii, No. 23.

Vaginal irrigation under pressure in gynecological practice before vaginal operations and in the examination of prostitutes. DREUW. München. med. Wchnschr., 1913, lx, No. 25.

Esthiomene, or lupus vulvæ. KURG. J. Obst. & Gynec. Brit. Emp., 1913, xxiii, 353. [435]

Perineorrhaphy with the buried layer stitch. ROLAND HAZEN. *Internat. J. Surg.*, 1913, xxvi, 214. [436]

Primary and end results of the operative treatment of perineal lacerations, vaginal and uterine prolapse through restoration of the pelvic floor. SCHABAK. *Med. Rundschau*, 1913, xl, 630. [436]

The newer operations for restoration of the pelvic floor with an original technique for exposing and uniting the injured levatores ani and deep transversus perinei muscles. BARTON C. HIRST. *Am. J. Obst.*, N. Y., 1913, lxvii, 1148.

Miscellaneous

Cystoscopy and catheterization of the ureter as aids to diagnosis in gynecology. HORWITZ and IPATOFF. *Arb. a. d. geburtsh. gynäk. Klin.*, Prof. Redlich, St. Petersb., 1913, i, 41.

Extravesical opening of the ureter in women. J. P. HARTMANN. *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, 69. [436]

Incontinence of urine in women. H. A. KELLY. *Urol. & Cutan. Rev.*, 1913, xvii, 291.

Congenital malformation of the genital system in woman. PIETKIEWICZ. *Przegl. chir. i ginek.*, 1913, viii, No. 3.

A false diagnosis in a rare malformation of the internal genital organs. STRATZ. *Gynäk. Rundschau*, 1913, vii, No. 13.

Preventive phases of gynecology. J. H. HIDE. *Therap. Rec.*, 1913, viii, 183.

Experiences in the gynecological clinic of the Royal University of Munich with mesothorium and X-ray treatment of uterine carcinomata. VON SEUFFERT. *Strahlentherapie*, Berl., 1913, ii, No. 2.

X-ray treatment in gynecology. KREUZFUCHS. *Wien. med. Wchnschr.*, 1913, lxiii, No. 24.

X-ray treatment in gynecology. DOHAN. *Fortsch. a. d. Geb. d. Röntgenstr.*, 1913, xx, No. 4.

Radiotherapy in gynecology. D'HALLUIN. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 25.

Röntgenotherapy in gynecology. M. NEMENOW. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 326.

Clinical experiences regarding the limits of erythema in gynecological deep radiotherapy by the use of strongly filtered rays. BORELL. *Strahlentherapie*, Berl., 1913, ii, No. 2.

Gynecological deep röntgenotherapy. GAUSZ. *Strahlentherapie*, Berl., 1913, ii, No. 2.

Clinical experiences regarding lesions of the skin in gynecological deep radiotherapy by the use of slightly filtered rays. ROMINGER. *Strahlentherapie*, Berl., 1913, ii, No. 2.

Experimental researches on gynecological deep radiotherapy. ROST and KRÜGER. *Strahlentherapie*, Berl., 1913, ii, No. 2.

Mesothorium as a substitute for rays in gynecology. H. VOIGTS. *München. med. Wchnschr.*, 1913, lx, No. 22. [437]

Methods of applying Röntgen rays in gynecology. S. G. SARETZKY. *Arb. a. d. geburtsh. gynäk. Klin. Prof. Redlich, St. Petersb.*, 1913, i, 113.

The action of the so-called gas bacillus upon the female genitalia. E. FRAENKEL. *Klin.-therap. Wchnschr.*, 1913, xx, 485. [437]

Contribution to the study of the localization of microorganisms in experimental septicæmia. U. SELLA. *Ann. di ostetr. e ginec.*, 1913, xxxv, 206. [437]

Intraperitoneal hæmorrhages of genital origin, but not due to pregnancy. GROSS and HEULEY. *Arch. mens. d'obst. et de gynec.*, Par., 1913, ii, No. 5.

Observations upon the formation of terata. EDW. A. SCHUMANN. *Am. J. Obst.*, N. Y., 1913, lxvii, 1159.

One gauze sponge removed from bladder, another from the vagina, months after a Dührssen operation for prolapse. HENRY D. FURNISS. *J. Am. M. Ass.*, 1913, lx, 1879.

The employment of fermentin tablets in gynecology. J. HIRSCHFELD. *Fortschr. d. Med.*, Berl., 1913, xxxi, 606.

The employment of iodine in gynecology. GAUGAIN. *Arch. méd. d'Algers*, 1913, xvii, No. 6.

The action of mesothorium upon genital tumors. KROEMER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [438]

Further control of the morbidity and the mortality in abdominal operations for pelvic diseases. GEO. W. CRILE. *N. Y. St. M. J.*, 1913, xiii, 300.

Further clinical and etiological communications on pseudo-tuberculous ulcers of the female genitalia. SCHERBER. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 26.

The operative treatment of old infiltrations. FALGOWSKI. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [438]

OBSTETRICS

Pregnancy and Its Complications

Multiple pregnancy, quadruplets. HENRY PEET. *Australas. M. Gaz.*, 1913, xxxiii, 615.

Quadruplets and their mothers. H. HAUSER. *München. med. Wchnschr.*, 1913, lx, 812. [439]

On the hypophysis in general and on its changes during pregnancy. GLINSKY. *Klin.-therap. Wchnschr.*, 1913, xx, No. 22.

Further contribution on the displacement of the cæcum during pregnancy. FÜTH. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [439]

Varicose veins and pregnancy. GRÜNFELD and ALLMEYER. *Med. Klin.*, Berl., 1913, ix, Nos. 22 and 23.

Tuberculosis and pregnancy. STUTZ. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxviii, No. 2.

Cardiac disease and pregnancy. SELLHEIM. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

Diseases of the kidneys during pregnancy of women suffering from heart disease. R. JASCHKE. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [439]

Kidney and pregnancy. R. JASCHKE. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [439]

Heart and kidney affections during pregnancy. SCHMIDT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [440]

Kidney disease and pregnancy. STOECKEL. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [440]

Kidney function in pregnancy and in the toxæmias of pregnancy. FETZER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [440]

The function of the kidney in pregnancy and the eclamptic kidney. ECKELT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [441]

The kidney of pregnancy and nephritis in graviditate. HOLZBACH. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [441]

- Pyelitis and its relation to pregnancy. **MAYER.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [441]
- Pyelitis gravidarum. **OPITZ.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [441]
- Etiology and treatment of pyelitis gravidarum. **KROEMER.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [441]
- Serological and clinical phenomena in pyelitis of pregnancy. I. Antibodies in the maternal and foetal blood in cases of pyelitis of pregnancy. **WEIBEL.** Arch. f. Gynäk., 1913, 245. [442]
- Concerning a peculiar form of glycosuria in pregnancy and its relation to diabetis mellitus. **NOVAK and STRISOWER.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [442]
- Glycosuria and diabetes from the obstetrical and gynecological point of view. **COLORNI.** Ann. di ostetr. e ginec., Milano, 1913, xxxv, No. 5.
- Acute membranous vaginitis in pregnancy, due to enterococcus. **GEO. E. SHOEMAKER.** Penn. M. J., 1913, xvi, 703. [442]
- A case of repeated hemiparesis during pregnancy. **V. D. BALDASSARI.** Lucina, 1913, xviii, 36.
- A case of rupture of the uterus during pregnancy. **SELLHEIM.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [442]
- A case of extensive rupture of the utero-vaginal junction, with escape of the placenta into the peritoneal cavity. **BANNISTER.** Proc. Roy. Soc. Med., 1913, vi, Obst. & Gynec. Sect., 237. [442]
- Pregnancy and labor complicated by ovarian cysts. **SAMGIN.** Med. Rundschau, 1913, iv, 324. [443]
- Multiple sclerosis in pregnancy and labor. **BECK.** Deutsche Ztschr. f. Nervenheilk., 1913, xlv, 127. [443]
- Placenta previa. **SCHIEFFZEK.** Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 878.
- The pathology of premature detachment of the normally attached placenta. **ESSEN-MÖLLER.** Lunds Univ. Arsskr., 1913, ix, No. 10.
- Surgical treatment of hæmorrhages due to separation of the normally and abnormally situated placenta. **COUVELAIRE.** J. d. sages-femmes, 1913, xli, 241. [443]
- Bilateral and multiple ectopic pregnancy. **MCDONALD and KRIEGER.** J. Am. M. Ass., 1913, lx, 1766. [444]
- Diagnosis of extra-uterine pregnancy. **CATURANI.** Arch. ital. di ginec., Napoli, 1913, xvi, No. 5.
- The difficulties in the diagnosis of extra-uterine pregnancy. **S. M. BRICKNER.** N. Y. St. M. J., 1913, xiii, 324.
- The diagnosis and treatment of extra-uterine pregnancy and report of over 100 continuous operative cures. **MÜHSAM.** Therap. d. Gegenw., 1913, liv, 199. [444]
- Extra-uterine pregnancy and its subsequent history: an analysis of one hundred and forty-seven cases. **P. WILLIAMS.** Am. J. Obst., N. Y., 1913, lxvii, 1165.
- A case of extra-uterine pregnancy associated with peritoneal hæmorrhage and hæmoglobinuria. **BORCHOFF.** Russk. Vrach, St. Petersburg, 1913, xii, No. 18.
- Extra-uterine pregnancy complicated by normal pregnancy. **FABRIS.** Policlin., Roma, 1913, xx, No. 24.
- Bilateral extra-uterine pregnancy; total abdominal hysterectomy; appendectomy. **JARCA.** Spitalul, Bucuresti, 1913, xxxiii, No. 8.
- A case of full-term living child removed by laparotomy in an extra-uterine pregnancy. **NOEL L. HOOD.** Lancet, Lond., 1913, clxxxiv, 1662.
- A primary ovarian pregnancy at the fourth month. **MCCANN.** Proc. Roy. Soc. Med., 1913, vi, Obst. & Gynec. Sect., 229. [444]
- A contribution to the study of eclampsia as a toxæmia of possible mammary origin. **P. WILSON.** Am. J. Obst., N. Y., 1913, lxvii, 1111. [445]
- The viscosity of the blood in eclampsia and other diseases of the female organism. **ENGELMANN and ELPERS.** Gynäk. Rundschau, 1913, vii, 315. [445]
- Further experience with the expectant treatment of eclampsia. **LICHTENSTEIN.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [446]
- Disturbance of kidney function in eclampsia. **KROEMER.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [446]
- The treatment of eclampsia. **NACKE.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [446]
- The treatment of eclampsia. **FREUND.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [446]
- Current opinions concerning the toxæmia of pregnancy. **WM. PFEIFER.** Am. J. Obst., N. Y., 1913, lxvii, 1088.
- Cæsarean section. **JOSEPH MÜLLER.** Berl. klin. Wchnschr., 1913, l, 1375.
- Report of three cases of Cæsarean section. **A. M. HILKOWICH.** N. Y. M. J., 1913, xcvi, 1242.
- Bacteriological examination in extra-peritoneal Cæsarean section. **BONDY.** Ztschr. f. Geburtsh. u. Gynäk., 1913, lxxviii, No. 2.
- The extra-peritoneal section. **SCHIEFFZEK.** Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 880.
- The uterine cicatrix after the Cæsarean section. **AUDEBERT.** Ann. de gynec. et d'obst., Par., 1913, x, May.
- Inevitable abortions. **P. J. WILEY.** Med. Sentinel, 1913, xxi, 977.
- Criminal abortion. **A. BOISSARD.** Enfance, 1913, i, 431.
- Twenty-nine cases of attempt at bringing about abortion in falsely diagnosed extra-uterine pregnancy. **NEUGEBAUER.** Gynäk. Rundschau, 1913, vii, No. 11.
- Miscarriage and its surgical treatment. **MARINELLI.** Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 67.
- Some unusual obstetrical complications. **F. M. MYERS.** N. Y. M. J., 1913, xcvi, 1176.
- The obstetrical significance of the status hypoplasticus. **E. VOGT.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [447]
- The obstetrical and gynecological significance of tetany. **KEHRER.** Arch. f. Gynäk., 1913, xcix, 372. [447]

Labor and Its Complications

- An analysis of 700 cases of labor. **R. COSTON.** J. Am. M. Ass., 1913, lx, 2033.
- Fever during delivery; obstetric indications for its treatment. **TERZAGHI.** Arte ostetr., 1913, xxvii, 70. [448]
- Pelvic outlet tumors a hindrance in child-birth. **KUSMIN.** Med. Rundschau, 1913, iv, 343. [448]
- Hæmangioma of the arm as an obstacle in delivery. **FRANK.** München. med. Wchnschr., 1913, lx, 1149.
- What can be accomplished with the method of Deventer-Müller for the delivery of the shoulders? **ZIEGLER.** Beitr. z. Geburtsh. u. Gynäk., 1913, xviii, 271. [448]
- A maneuver for the correction of a face presentation. **ZANGEMEISTER.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [448]
- A case of rupture of a hydrocele during delivery. **DZIEWONSKI.** Przegl. lek., Kraków, 1913, lii, No. 23.
- Death due to rupture of cesophageal varices occurring during labor. **RIZZACASA.** Giorn. internaz. d. sc. med., 1913, xxxv, 301. [449]
- Fatal intraperitoneal hæmorrhage during labor, due to rupture of uterine veins. **ERWIN LANGES.** Zentralbl. f. Gynäk., 1913, xxxvii, 537. [449]
- Medical treatment for weak labor during parturition. **HANS REINHARD.** Deutsche med. Wchnschr., 1913, xxxix, 747. [449]

The galvanization treatment of the uterus according to Bayer in conjunction with pituitrin as a means for the artificial induction of premature labor and labor at term. VOGELSBERGER. *Med. Klin.*, 1913, ix, 620. [449]

Indications for the high forceps operation. HERBERT OLD. *Va. M. Semi-Month.*, 1913, xxviii, 6.

Subcutaneous symphysiotomy of Frank. KEHRER. *Arch. f. Gynäk.*, 1913, xcix, 294. [450]

Puerperium and Its Complications

Three cases of symmetrical necrosis of the cortex of the kidneys, associated with puerperal eclampsia and suppression of urine. JARDINE and KENNEDY. *Lancet*, Lond., 1913, clxxxiv, 1291. [450]

A critical review of the medical and surgical treatment of puerperal eclampsia. E. G. ZINKE. *Am. J. Obst.*, N. Y., 1913, lxvii, 1065.

The results of new researches on puerperal fever. O. BONDY. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 821.

Clinical and experimental investigations concerning the action of oxytocic substances during the puerperium. RÜBSAMEN. *München. med. Wchnschr.*, 1913, lx, 627. [450]

Differential diagnosis and treatment of puerperal infection. R. H. HUGGINS. *Penn. M. J.*, 1913, xvi, 695. [451]

Advanced treatment of puerperal infection. ROBT. T. GILLMORE. *J. Am. M. Ass.*, 1913, lx, 1955.

A case of puerperal infection cured by operation. BRIX. *München. med. Wchnschr.*, 1913, lx, No. 24.

Prophylaxis of puerperal infection. SCHWEITZER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [451]

Puerperal tetanus. R. Worrall. *Australas. M. Gaz.*, 1913, xxxiii, 464.

Localizing peritonitis of puerperal origin. H. T. HICKS. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiii, 300.

The significance of post-partum hæmorrhages. SCHEFFZEK. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 872.

Puerperal insanity. STODDART. *Clinical J.*, 1913, xliii, 189. [451]

Miscellaneous

The relations of affections of the heart to pregnancy, delivery and puerperium. FROMME. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [451]

Serum diagnosis of pregnancy. ZOEPPRITZ. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [452]

The biological diagnosis of pregnancy by the aid of the optic and dialysis methods. RÜBSAMEN. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [452]

The diagnosis of pregnancy by Abderhalden's method. POLANO. *Sitzungsber. d. physikal.-med. Ges.*, Würzb., 1913, ii, 23.

Abderhalden's dialytic procedure. LICHTENSTEIN. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [452]

Dry placental powder and its employment in Abderhalden's dialytic procedure for the diagnosis of pregnancy. V. L. KING. *München. med. Wchnschr.*, 1913, lx, 1198.

The sero-diagnosis of pregnancy by the dialysation method. C. F. JELLINGHAUS and J. R. LOSEE. *Bull. Lying-In Hosp.*, 1913, ix, 68.

The diagnosis of pregnancy by means of the dialysis and the optical method. EMIL ABDERHALDEN. *Gynäk. Rundschau*, 1913, vii, 467.

Studies of the reaction of Abderhalden's serum. B. ASCHNER. *Berl. klin. Wchnschr.*, 1913, l, 1243.

Abderhalden's pregnancy reaction. F. HEIMANN. *Berl. Klin.*, 1913, xxv, 1.

Artificial and natural conditions causing the Abderhalden reaction, and their significance. ERNST HEILNER and T. PETRI. *München. med. Wchnschr.*, 1913, lx, 1530.

Experimental research on the physiology of the hypophysis. SCHLIMPERT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [453]

Clinical experiments with pituglandol. BASSET. *Med. Klin.*, Berl., 1913, ix, 457. [453]

Organotherapeutic value of adrenalin in pregnancy. ZANFROGINI. *Ann. di ostet. e ginec.*, Milano, 1913, xxxv, 247. [453]

The value of the caput succedaneum as a sign of "vital reaction." ZIEMKE. *Vierteljahrsschr. b. gerichtl. Med.*, 1913. [453]

Modern ecobolico with special reference to B-imidazoly-läthylamin. C. KOCH. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 564. [453]

The diagnostic employment of the Röntgen rays in obstetrics. HEYNEMANN. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxviii, No. 1.

Pelvic measurement by means of X-rays. DESSAUER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [453]

Diagnostic and therapeutic employment of aspiration, by means of the fontanelle, of obstetrical hæmorrhages of the new-born. HENSCHEN. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 25.

The significance of meconium in dissections of the new-born. G. G. PERRANDO. *Riforma med.*, 1913, xxix, 325. [454]

The nutritive value of colostrum; a contribution on the nursing's requirement of energy during the first days of life. L. LANGSTEIN, F. ROTT and F. EDELSTEIN. *Ztschr. f. Kinderheilk.*, 1913, vii, 210.

The employment of extracts of the hypophysis in obstetrics and gynecology. METZGER. *Arch. mens. d'obst. et de gynec.*, Par., 1913, ii, 481.

Pituitrin in obstetrics. J. K. QUIGLEY. *N. Y. St. M. J.*, 1913, xiii, 317.

The casuistry of the action of pituitrin. GRUMANN. *München. med. Wchnschr.*, 1913, lx, 1436.

Pituitrin as an aid in labor. ALFRED DEUTSCH. *Wien. med. Wchnschr.*, 1913, lxiii, 1367.

Disinfection in obstetrics and manual detachment of the placenta. Remarks in regard to the work of C. Sievert. FRIEDRICH GAUS. *Deutsche med. Wchnschr.*, 1913, xxxix, 1363.

Placental infarct and intra-uterine under nourishment. TASSIUS. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 869.

Complement deviation by corpus luteum secretion. J. T. SMITH. *Am. J. Obst.*, N. Y., 1913, lxvii, 1007.

Some obstetric observations pertaining to internal secretion. W. H. GOOD. *Am. J. Obst.*, N. Y., 1913, lxvii, 1100.

The toxicity of the urine during pregnancy, labor and puerperium. FRANZ. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [454]

Generation as influenced by intoxication. P. NACKE. *Ztschr. f. d. Neurol. u. Psychiatr.*, 1913, xvii, 474.

Further observations upon birth fractures. EDW. D. TRUESDELL. *Bull. Lying-In Hosp.*, 1913, ix, 103.

The intra-abdominal pressure in pregnancy. R. H. PARAMORE. *Lancet*, Lond., 1913, clxxxiv, 4686.

Lower arm type of obstetric (brachial) paralysis; report of a case. R. H. FOWLER. *Internat. J. Surg.*, 1913, xxvi, 196. [454]

On the pressure experienced by the foetus in utero during pregnancy; with special reference to achondroplasia

(chondrodystrophia foetalis). D. B. HART. *Edinb. M. J.*, 1913, x, 496.

The origin of the syncytial lacunæ in human ova. HINSELMANN. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [454]

Cervical decidua. F. W. LYNCH. *Surg., Gynec. & Obst.* 1913, xvi, 694.

Urine analysis in midwifery. B. C. DONNARUMMA. *Gin. minore*, 1913, vi, 25.

Problems of obstetrical treatment. W. W. CHIPMAN. *J. Maine M. Ass.*, 1913, iii, 1356.

Remarks on Rotter's method of curing contracted

pelvis. E. GERSTENBERG. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 409. [455]

Concerning hebosteotomy. L. A. KRIWSKY. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 435. [455]

An obstetrical instrument. ROBT. SANITER. *München. med. Wchnschr.*, 1913, lx, 1437.

Investigations in regard to the so-called glande endocrine myometriale." FRAENKEL. *Arch. f. Gynäk.*, 1913, xcix, 225. [455]

Statistics of a Chinese policlinic. VORTISCH-VAN VLOTEN. *Arch. f. Schiffs- u. Tropen-Hyg.*, 1913, xvii, 253. [455]

GENITO-URINARY SURGERY

Kidney and Ureter

Recent studies of the adrenal glands. FRANZ LUCKSCH. *Prag. med. Wchnschr.*, 1913, xxxvii, 365.

Birefractive lipid of the suprarenals. WELTMANN. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 2.

Extirpation of the suprarenal capsules in a mouse in parabiosis. MORPURGO. *Gior. d. r. Accad. di med. di Torino*, 1913, lxxvi, Nos. 1-2.

Röntgenological diagnosis in disease of the kidneys. A. BURCHARD. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 244.

Bilateral lithiasis. OLIVER C. SMITH. *N. Y. M. J.*, 1913, xcvi, 1282. [456]

Notes on two cases of urinary calculus. C. A. MOORE. *Bristol Med.-Chir. J.*, 1913, xxxi, 120.

Radiography in the diagnosis of nephrolithiasis. KLEINBERGER. *Berl. klin. Wchnschr.*, 1913, l, No. 22.

On the differential diagnosis of appendicitis and nephrolithiasis. KROTOSZYNER. *Calif. St. Med. J.*, 1913, xi, 287.

A case of pseudo-calculus in the X-ray picture. PONZIO. *Gior. d. r. Accad. di med. di Torino*, 1913, lxxvi, Nos. 1-2.

Calculus of the renal pelvis; pyelotomy; recovery. BERNASCONI. *Bull. méd. de l'Algérie, Alger*, 1913, xxiv, No. 10.

Three cases of large renal calculi which had remained absolutely latent. PILLET. *J. d'urolog.*, Par., 1913, iii, No. 6.

Biliary calculi causing errors in renal radiography. ARCELIN. *Lyon méd.*, 1913, cxx, 1129. [456]

Experiments on the influence of an injured kidney on the kidney of the other side. K. ISOBE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 1. [456]

What should be the diagnosis of the contusions of the kidneys? TOUSSAINT. *J. d. praticiens*, Par., 1913, xxvii, No. 25.

Floating kidney in polycystic degeneration. CARLO. *Clin. chir.*, Milano, 1913, xxi, No. 5.

The operative treatment of floating kidneys. KOCHER. *Cor.-bl. f. schweiz. Ärzte*, 1913, xliii, 545. [457]

"Dumb-bell" kidney. J. L. HERMAN and GEORGE FETEROLF. *Ann. Surg.*, Phila., 1913, lvii, 868.

Degeneration of the cells of the kidney as a result of permanent obliteration of circulation. TURK. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 2.

The opportunity for a new method of controlling renal hæmorrhages. GIORDANO. *Rev. osp.*, Roma, 1913, iii, No. 11.

A case of hæmaturia difficult to interpret etiologically (hydro-pyo-hæmonephrosis). SAVERIO CORRERA. *Rev. osp.*, Roma, 1913, iii, No. 11.

Cancer of the kidney and thrombosis of the vena cava. GAYET and BÉRIEL. *Lyon chir.*, 1913, ix, No. 6.

Renal neoplasm of the size of a cherry, revealed by abundant hæmaturias; nephrectomy. JEANBRU and ÉTIENNE. *J. d'urolog.*, Par., 1913, iii, No. 6.

The etiology of kidney cysts. J. R. CAULK. *Ann. Surg.*, Phila., 1913, lvii, 840. [457]

A case of hydatid cyst of the kidney. IRACI. *Policlin.*, Roma, 1913, xx, No. 21.

Cystic kidney. VERSÉ. *München. med. Wchnschr.*, 1913, lx, 1409.

The cystic kidney; studies regarding its pathologic anatomy. O. BERNER. *Kristiania: Eig. Verlag*, 1913. [457]

The infectious diseases of the kidney and urinary passages (excluding tuberculosis). EDWARD SCHEIDEMANDEL. *Abhandl. a. d. Ges. d. prakt. Med.*, 1913, xiii, 179. [458]

Röntgenological demonstration of paranephritic abscesses. E. KOLL. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 298.

Pyonephrosis. SCHEFFZEK. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 869.

A case of post-operative perinephritis serosa. A. BAUEREISEN. *Ztschr. f. gynäk. Urol.*, 1913, iv, 124. [459]

Chronic nephritides from the point of view of surgery. J. MURARD. *Thèses de Lyon*, 1913.

Operative indications in chronic nephritis. POUSSON. *J. d'urolog.*, Par., 1913, iii, No. 6.

The present standpoint in regard to nephritis and nephritic surgery. E. RUGE. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 565.

Pathology and treatment of pyelitis. KRAUSMAN. *Pract. Vrach.*, St. Petersburg, 1913, xii, Nos. 18 and 19.

The treatment of pyelitis by the aid of local treatment. RAIMOLDI. *Rev. osp.*, Roma, 1913, iii, No. 11.

Contribution to the study of pyelitis granulosa. W. BAETZNER. *Ztschr. f. urol. Chir.*, 1913, i, 285. [459]

Tuberculosis of the kidney. RAMON GUITERAS. *Canad. Pract. & Rev.*, 1913, xi, 333.

Renal tuberculosis; report of a case. A. H. LIPPINCOTT. *J. Med. Soc. N. J.*, 1913, x, 13.

Encysted tuberculosis of the kidneys. L. CASPER. *Ztschr. f. Urol.*, 1913, vii, 532.

Surgery in renal tuberculosis. PORCILE. *Policlin.*, Roma, 1913, xx, No. 25.

New data on the etiology of hydronephroses. MICHAŁOW. *Ztschr. f. Urol.*, 1913, vii, No. 6.

Traumatic hydronephrosis. W. EARLE DRENNEN. *Ann. Surg., Phila.*, 1913, lvii, 879. [459]

A case of right-sided intermittent hydronephrosis caused by two accessory renal arteries; operative removal of same; recovery. O. ALEMAN. *Nord. med. Ark.*, 1913, xl, No. 10. [460]

Syphilis of the kidneys. A. WELZ. *Deutsche med. Wchnschr.*, 1913, xxxix, 1201.

Renal gonorrhœa. C. M. HARPSTER. *Ohio St. M. J.*, 1913, ix, 269.

The cause of pain in pyelography with report of accident and experimental findings. C. E. TENNANT. *Ann. Surg., Phila.*, 1913, lvii, 888. [460]

Decapsulation of the kidney. W. K. WARISCHTSCHIEFF. *Chir. Arch. Veliāminova*, 1913, xxix, 250. [460]

Nephrectomy followed by immediate decapsulation of the remaining kidney. SERAFINI. *Gior. d. r. Accad. di med. di Torino*, 1913, lxxvi, Nos. 1-2.

Pyelotomy. ÖLSNER. *Ztschr. f. Urol.*, 1913, vii, No. 6.

An experimental study of several methods of suturing the kidney. JAS. E. MOORE and J. F. CORBETT. *Ann. Surg., Phila.*, 1913, lvii, 860. [461]

Experimental investigations on the physiology and pathology of renal function. BÄTZNER. *Arch. f. exp. Path. u. Pharm.*, Leipzig, 1913, lxxii, No. 5.

Functional tests performed on transplanted kidneys. LOBEN-HOFFER. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, Jena, 1913, xxvi, No. 2.

Bilateral ureterolithotomy in calculous sanuria. A. LÄWEN. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 411. [461]

Congenital malformations of the ureter (double ureter with vaginal orifice). PIERI. *Rev. osp.*, Roma, 1913, iii, No. 11.

Cases and operative treatment of supernumerary aberrant ureters. HARTMANN. *Ztschr. f. Urol.*, 1913, vii, 429. [461]

Clinical study of stenoses of the ureter (wide stenoses). DESNOS. *J. d'urol.*, Par., 1913, iii, No. 6.

Obstruction of the ureter by aberrant renal vessels; a clinical study of the symptoms and results of operation. J. HUTCHINSON. *Proc. Roy. Soc. Med.*, 1913, vi, Surg. Sect., 201. [461]

Contribution to the study of intermittent ureteroceles vesicalis. B. OTTOW. *Ztschr. f. gynäk. Urol.*, 1913, iv, 103. [462]

Cystic dilatation of the vesical end of the ureter. LOHNSTEIN. *Ztschr. f. Urol.*, 1913, vii, 517. [462]

The local treatment of retention of urine and pus in the kidney by means of ureteral catheterization. P. ZUCKERKANDL. *Wien. med. Wchnschr.*, 1913, lxxiii, 1345. [462]

Permanent or temporary derivation of the urine by means of nephrostomy. PAKOWSKI. *Thèse de doct.*, Par., 1913. [462]

A small muscle-splitting incision for the exposure of the pelvic portion of the ureter. FRANK KIDD. *Lancet*, Lond., 1913, clxxxiv, 1578. [463]

The instruments used and the technique in posterior ureteroscopy. HENRY. *J. d'urol.*, Par., 1913, iii, No. 6.

Bladder, Urethra and Penis

Where is the fundus of the bladder? B. LEWIS. *J. Am. M. Ass.*, 1913, lx, 1765. [463]

The operative treatment of rebellious cystitis cases with curettement of the bladder and temporary urinary fistula. H. UNTERBERG. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 251. [463]

Contribution to the treatment of exstrophy of the bladder. LERDA. *J. de chir.*, 1913, x, 549. [463]

Maydl's operation in exstrophy of the bladder. KOUZ-NIEZKY. *Pract. Vrach*, St. Petersburg, 1913, xii, No. 22.

The surgical treatment of exstrophy of the bladder. VULLIET. *Lyon chir.*, 1913, ix, No. 6.

Exclusion of the bladder. OPPEL. *Arb. d. chir. Klin. d. Prof. Oppel*, St. Petersburg, 1913, iv, 3. [465]

A clinical study of the application of improved intra-vesical operative methods in diagnosis and therapy. LEO BUEGER. *Med. Rec.*, 1913, lxxxiii, 1114. [465]

Epicystotomy in vesical calculi and a new method of suturing the bladder. DE FRANCISCO. *Gazz. med. ital.*, Torino, 1913, lxiv, No. 24.

Case of urethral calculus; prostatic division. D. L. HIRSCHLER. *J. Am. M. Ass.*, 1913, lx, 1952.

Note on a case of urethral calculus of unusually large size. E. A. WALKER. *Lancet*, Lond., 1913, clxxxiv, 1587.

A case of double urethra. FRONSTEIN. *Russk. Vrach*, St. Petersburg, 1913, xii, No. 21.

Congenital stenosis of the urethra. RIEDEL. *Arch. f. klin. Chir.*, 1913, ci, No. 3.

Experience with over one thousand cases of a form of chronic urethritis. S. H. LIKES and HERBERT SCHOENRICH. *J. Am. M. Ass.*, 1913, lx, 1940.

Gonorrhœa from a pathological standpoint. GEORGE A. WYETH. *N. Y. M. J.*, 1913, xcvi, 1217.

The effect of gonorrhœal infections upon the genito-urinary tract. C. S. HIRSCH. *Am. J. Urol.*, 1913, ix, 283. [465]

The treatment of gonorrhœa in the male. D. T. MILLER. *Urol. & Cutan. Rev.*, 1913, xvii, 316.

A curious case of uro-genital tuberculosis; invasion of the mucous membrane of the urethra. MALHERBE. *Gaz. méd. de Nantes*, 1913, xxxi, No. 22.

Mensuration and projection of the posterior urethra and vesical floor by means of posterior urethral calipers and radiography. VICTOR C. PEDERSEN and LEWIS G. COLE. *N. Y. M. J.*, 1913, xcvi, 1273. [465]

The comparative value of cystostomy and urethrostomy in operations on the urethra. R. H. SILVA. *Am. J. Urol.*, 1913, ix, 277. [466]

Primary tuberculosis of the glans penis. EDMUND A. BABLER. *Ann. Surg., Phila.*, 1913, lvii, 894.

On the formation of bone in the human penis. A. G. GERSTER and F. S. MANDLEBAUM. *Ann. Surg., Phila.*, 1913, lvii, 896.

Erosive and gangrenous balanitis; the fourth venereal disease. B. C. CORBUS. *J. Am. M. Ass.*, 1913, lx, 1769.

Masculine pseudohermaphroditism. GRÜNEBERG. *München. med. Wchnschr.*, 1913, lx, 1516.

Genital Organs

New researches concerning the internal secretion of the testicles. MARASSINI. *Policlin.*, Roma, 1913, xx, No. 6.

Hæmorrhagic infarcts of the testicles. MASCHKE. *Med. Klin.*, Berl., 1913, ix, 869.

Tuberculosis of an ectopic testicle. FERRON. *J. d'urol.*, Par., 1913, iii, No. 6.

Seminal epithelioma (new-growth of the testicles). L. P. SCHISCHKO. *Arb. a. d. chir. Klin. d. Prof. Oppel*, St. Petersburg, 1913, iv, 101.

Enchondroma of the testicle in a young soldier. SABATIER and DUPUICH. *Arch. de méd. et de pharm. mil.*, Par., 1913, lxi, No. 6.

Eunuchoidism. TANDLER. *Wien. med. Wchnschr.*, 1913, lxxiii, No. 23.

Comparative study of the treatment of acute gonorrhœal epididymitis with antigeningococcic serum. SCHMUTZ. *Thèse de doct.*, Par., 1913. [466]

Tuberculosis of the epididymis; its effect upon testicles

and prostate. J. D. BARNEY. Boston M. & S. J., 1913, clxviii, 923. [467]

Epididymitis: its nature and treatment. E. J. ANGLE. Am. J. Clin. Med., 1913, xx, 491.

A histopathological study of gonorrhoeal epididymitis and its treatment. NAKANO. Ztschr. f. Urol., 1913, vii, No. 6.

The treatment of gonorrhoeal complications, particularly epididymitis gonorrhoeica, with electragol. JULIUS FURTH. Dermatol. Wchnschr., 1913, lvi, 689.

Affection of the colliculus seminalis. A. WASSILJEV. Dissertation, St. Petersburg, 1913.

The question as to the use of autoserotherapy in cases of hydrocele. ZDANOWICZ. Ztschr. f. Urol., 1913, vii, 386.

Affections of the prostate. PORTNER. Med. Klin., Berl., 1913, ix, Nos. 23 and 25.

Prostatic electrolysis. LAFOND-GRELLET. Gaz. hebdomadaire de Bordeaux, 1913, xxxiv, No. 23.

Total prostatectomy in the so-called prostatic hypertrophy. GRINENKE. Dissertation, St. Petersburg, 1913. [467]

Non-operative treatment of prostatitis; author's method. Wm. B. SNOW. Urol. & Cutan. Rev., 1913, xviii, 312.

Present status of prostatic surgery. C. D. LOCKWOOD. Calif. St. J. Med., 1913, xi, 229.

Immediate secondary recovery from cystotomy on account of transvesical prostatectomy. GIOVANETTO. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 66.

Restoration of the bladder function after prostatectomy. JOS. B. BISSEL. Internat. J. Surg., 1913, xxvi, 193. [467]

Ten new cases of suprapubic prostatectomy. VIANNAY. Loire méd., St. Étienne, 1913, xxxii, No. 6.

Prostatectomy with special reference to the sequels. J. E. MOORE. Surg., Gynec. & Obst., 1913, xvi, 618.

A case of teratoma of the scrotum. ANGELESCO and SAVESCO. J. de chir. de Bucarest, 1913, i, No. 1.

Miscellaneous

Points in diagnosis of certain urinary diseases. A. W. NELSON. Lancet-Clin., 1913, cix, 682.

Experimental study concerning bacillus coli infections of the urinary organs. OTTO HESS. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, 135. [467]

Bacteriological findings in affections of the extra-renal urinary tracts in children and adults. H. KODAMA and N. KRASNOGORSKI. Zentralbl. f. Bakteriologie, 1913, lxi, 8.

Intraperitoneal lesions of the urinary organs. M. BOLTJES and P. KINGMA. Beitr. z. klin. Chir., 1913, lxxxiv, 347.

Injurious effect of chemicals upon spermatozoa. OSCAR HERTWIG. Sitzungsber. d. kgl. preuss. Akad. d. Wiss., Physikal. mathem. Kl., 1913, xxx, 564.

Silver iodide emulsion; a new medium for skiagraphy of the urinary tract. HOWARD A. KELLY and ROBERT M. LEWIS. Surg., Gynec. & Obst., 1913, xvi, 707. [468]

Radiology in urology. R. Y. A. PULIDO. Rev. espan. de electrol. y radiol. med., Valencia, 1913, ii, No. 15.

Bacteriological research in its relation to genito-urinary surgery. G. FRANK LYDSTON. Illinois M. J., 1913, xxiii, 603.

The special position of staphylococcosis of the urinary tracts. B. GOLDBERG. Ztschr. f. Urol., 1913, vii, 447.

Specific diagnosis and treatment of tuberculosis of the urinary and genital organs. MACKHARINSKY. Novoie v med., St. Petersburg, 1913, vii, No. 8.

The excretion of formalin in the urine; an inquiry into the accuracy of Burnam's test. GEO. W. SMITH. Boston M. & S. J., 1913, clxviii, 713. [468]

Determination of the occurrence of lactic acid in the urine. MAX DAPPER. Biochem. Ztschr., 1913, li, 398.

SURGERY OF THE EYE AND EAR

Eye

Intra-ocular foreign bodies. TERRIEN. Progrès méd., Par., 1913, xlv, No. 24.

A case of non-magnetic steel in the vitreous body. FRANK ALLPORT and ALEX. ROCHESTER. Ophth. Rec., 1913, xxii, 296.

Amblyopia from hæmorrhage. JAS. M. BALL. Interst. M. J., 1913, xx, 531. [469]

The etiology, diagnosis, and treatment of glaucoma. L. H. LANIER. Med. Fortnightly, 1913, xliii, 12.

Epithelioid desquamative and trachoma. LEBER. Australas. M. Gaz., 1913, xxxiii, 541.

Rarity of sarcoma of sclera; report of a case with removal and no recurrence. R. M. NELSON. J. Am. M. Ass., 1913, lx, 1766.

Chronic inflammatory tumor-formations of the orbit. MELLER. Arch. f. Ophth., 1913, lxxxv, 146. [469]

The cataract operation. J. G. HUIZINGA. J. Mich. St. M. Soc., 1913, xii, 309.

A case of pulsating exophthalmus. GEO. H. MATHEWSON. Ophth. Rec., 1913, xxii, 294. [469]

A case of gumma of the iris after the use of salvarsan. A. BRAV. Ophth. Rec., 1913, xxii, 299.

The treatment of iritis. GEO. W. VENDEGRAFT. Therap. Rec., 1913, viii, 181.

Concerning dermoids and dermo-lipomas of the conjunctiva. W. B. WEIDLER. Ophth. Rec., 1913, xxii, 291. [469]

A lecture on Miner's nystagmus. T. LISTER LLEWELLYN. Brit. M. J., 1913, i, 1359.

Sympathetic ophthalmia in occupational accidents. GINESTOUS. Progrès méd., Par., 1913, xlv, No. 25.

Optic iridectomy. L. K. BAKER. Cleveland M. J., 1913, xii, 424.

The height of brain pressure in some eye diseases. HEINE. München. med. Wchnschr., 1913, lx, 1305.

Enucleation under ciliary ganglion anæsthesia. J. S. WYLER. Lancet-Clin., 1913, cix, 648. [469]

Ear

Hæmorrhage of the auditory canal. A. QUADRI. Rev. de la méd. argent., 1913, xxi, 316.

Multiple papilloma of both external auditory meati. BLEYL. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, Wiesb., 1913, lxviii, Nos. 2 and 3.

Othematoma and serous extravasation of the auricle. BOUCHAUD. Rev. neurol., Par., 1913, xxi, No. 11.

Experimental studies on the pathology of acute inflammatory processes in the middle ear. HAYMANN. Arch. f. Ohrenh., Leipz., 1913, xc, No. 4.

Fistulae of the middle ear and perforations, cysts and abnormal bone formations at the base of the brain. RIEDEL. München. med. Wchnschr., 1913, lx, 1248.

Chronic otitis of the middle ear and its treatment. KLAU. Allg. med. Zentralztg., 1913, lxxxii, No. 22.

The antistreptococci serum and electrargol in generalized septic infection of otic origin. LANG. Arch. f. Ohrenh., Leipz., 1913, xc, No. 4.

Extra-dural abscess of otic origin and paralysis of the external oculo-motor muscle. ABOULKER. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 9.

Influenzal otitis. S. MACCUE. N. Y. M. J., 1913, xcvi, 1271.

The value and indications for incision of ear drum in otitis media. RICHARD M. NELSON. Atlanta J.-Rec. Med., 1913, lx, 106. [469]

Suppurative otitis media. JOHN R. WRIGHT. Ky. M. J., 1913, xi, 510.

Non-surgical treatment of otitis media. O. N. MORTENSON. Wis. M. J., 1913, xii, 8.

The non-surgical treatment of septicaemia and pyaemia of otic origin. LANG. Čas. lék. česk., Prague, 1913, No. 18.

Primary mastoiditis. HUMBLET. Scalpel et Liège méd., 1913, lxv, No. 48.

On Betzold's mastoiditis. S. SHIIZU. Sei-I-Kwai M. J., 1913, xxxii, No. 6.

A case of mastoiditis associated with occipital otitis. CANDELA. Cron. med., Valencia, 1913, xxv, No. 581.

Preservation of the antral capsule in operations for acute suppurative processes of the mastoid. N. H. PIERCE. Trans. Am. Otol. Soc., 1913, May. [470]

Two cases of trepanation of the labyrinth: operation; cure. COMPARRIEL. El Siglo med., 1913, No. 3102, 322. [470]

The duration of cicatrization in Schwarze's operation. HOLMGREN. Hygiea, Stockh., 1913, lxxv, No. 5.

The treatment of otosclerosis. ZALESKY. Čas. lék. česk., Prague, 1913, lii, No. 21.

The after-treatment of cases of radical operations in oto-rhinology. J. A. STUCKY. South. M. J., 1913, vi, 408.

Aural spades and angular curettes. H. P. BELLOW. J. Ophth., Otol. & Laryngol., 1913, xix, 215. [470]

Considerations on the diagnostic value of changes in the walk in diseases of the ear. GEZES. Rev. hebdom. de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 22.

SURGERY OF THE NOSE, THROAT, AND MOUTH

The rational treatment of nasal hydrorrhoea. M. LERMOYEZ. Univ. M. Rec., 1913, iii, 6.

Pfannenstiell's method in the treatment of lupus of the nasal cavity. JAS. STRANDBERG. Strahlentherapie, Berl., 1913, ii, 357.

Report of two unusual cases of nasal polypus, occurring in sisters, with results of operations. CHAS. W. KOLLOCK. South. M. J., 1913, vi, 405.

Clinical considerations of tumors of the nasal fossa. LAZARRAGA. Rev. de med. y cir. pract., Madrid, 1913, xxxvii, No. 1271.

The technique of the operative removal of large fibromata of the nasopharynx. PAYR. Zentralbl. f. Chir., 1913, xl, 871.

Some points in the technique of the submucous resection of the septum of the nasal fossa. BRINDEL. Rev. hebdom. de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 25.

Submucous resection of the nasal septum in the semi-recumbent position. WM. R. BUTT. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 201.

An anaerobic organism associated with acute rhinitis. RUTH TUNNICLIFF. J. Am. M. Ass., 1913, lx, 2033.

Some notes on the treatment of atrophic rhinitis by doriform. WM. IBBOTSON. Med. Press & Circ., 1913, xcv, 658. [471]

A form of ethmoiditis. RIMAUD. Loire méd., St. Étienne, 1913, xxxii, No. 6.

Sinus involvement in nasal conditions. FRANK G. REYNOLDS. Northwest Med., 1913, v, 166.

An extreme example of the unilateral antral cavity. GABELL. Proc. Roy. Soc. Med., 1913, vi, Odontol. Sect., 128. [471]

Recurring fibroma of the naso-pharynx. ROBERTSON. Australas. M. Gaz., 1913, xxxiii, 541.

The tonsil and its relation to tuberculosis. R. H. PARKER. Iowa M. J., 1913, xix, 606.

Enucleation of the tonsils. T. JEFFERSON FAULDER. Med. Press & Circ., 1913, xcv, 683.

Plea for the entire removal of enlarged and diseased tonsils. BEN CLARK GILE. Penn. M. J., 1913, xvi, 725.

An instrument for expediting the examination of embedded tonsils. H. TILLEY. Proc. Roy. Soc. Med., 1913, vi, Laryngol. Sect., 23. [471]

The cause of adenoid growths. H. E. JORDAN. Arch. Pediatrics, 1913, xxx, 468.

The adenoid in infants. When to operate. When not to operate. W. D. BABCOCK. South. Calif. Practitioner, 1913, xxviii, 205.

Carcinoma of the larynx, operation by thyrotomy, with subsequent hemilaryngectomy. G. W. MACKENZIE. Penn. M. J., 1913, xvi, 707.

A case of laryngocele as a secondary symptom of a typhoid laryngeal chondritis. BERIZZI. Gazz. med. ital., Torino, 1913, lxiv, No. 22.

Cyst of arytaeno-epiglottidean fold which burst spontaneously. E. A. PETERS. Proc. Roy. Soc. Med., 1913, vi, Laryngol. Sect., 126. [471]

Resection of the superior laryngeal nerve in the treatment of tuberculous dysphagia. WACHMANN. Gaz. med., Bucuresci, 1913, ii, No. 20.

A case of section of the superior laryngeal nerve. MOULONGUET. Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par., 1913, xxxix, No. 5.

The structure of the dental pulp in ovarian teratoma. HOPENWELL-SMITH. Proc. Roy. Soc. Med., 1913, vi, Odontol. Sect., 131. [471]

Resection of the tips of roots of teeth. GEPSTEIN. Subovrach. westnik, St. Petersburg, No. 5, 369.

The development of human teeth. HANS AHRENS. Anat. Hefte, Abt. I, 1913, xlviii, 167.

Tuberculosis of the gums. VON TAPPEINER. Deutsche Ztschr. f. Chir., 1913, cxii, 339. [471]

Primary carcinoma of the uvula. R. A. FRUSSOFF. Arb. a. d. chir. Klin. d. Prof. W. A. Oppel an d. mil. med. Akad. zu St. Petersburg, 1913, iv, 209.

Researches on the causal agent of noma. T. KIROIWA and M. YAMAGUCHI. Saikin-Saku-Zasshi, 1913, No. 211.

A case of swelling and ulceration of the tongue. LAWRIE MCGAVIN. Clin. J., 1913, xlii, 156.

Cleft palate surgery. G. B. SPEER. South. Calif. Practitioner, 1913, xxviii, 207.

INTERNATIONAL ABSTRACT OF SURGERY

NOVEMBER, 1913.

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

ANÆSTHETICS

Kruskal: Intratracheal Ether Anæsthesia. *Surg., Gynec. & Obst.*, 1913, xvii, 117.

By Surg., Gynec. & Obst.

Kruskal reports 84 cases of intratracheal ether anæsthesia with the Elsberg apparatus. While his experience in thoracic surgery is limited only to cases of empyema and lung abscess, he finds this method of decided advantage in operations where the anæsthetist is in the way or the position of the patient makes the administration of an anæsthetic awkward. In cases of obstruction to the upper air passages this method eliminates all the dangers of the ordinary methods of anæsthetization.

In the aged and feeble the relief of respiratory effort removes the strain on the cardiovascular system and thereby minimizes post-operative shock. The return current of air prevents the inhalation of blood and mucus and eliminates a decided factor in the production of aspiration pneumonia.

The technique of administration is that advocated by Elsberg; he finds that the introduction of the catheter has been extremely simple with the use of the Jackson laryngoscope. The only difficulty experienced with the method is the fact that in a number of his early cases the anæsthesia had been insufficient and it was found impossible to cause complete abdominal relaxation to permit thorough exploration.

McMechan: Oxygen and Anæsthesia. *Internat. J. Surg.*, 1913, xxvi, 205.

By Surg., Gynec. & Obst.

McMechan quotes the experiments of Gatch in over-ventilating the lungs post-operatively with oxygen in the presence of carbon dioxide retention, and after an exhaustive personal experience with the method at the close of drop-ether anæsthesias, states that not only is it successful in eliminating

the remnants of the anæsthetic from the alveoli of the lungs, the circulation and the cellular tissues, but also that after an interval of such rebreathing, depending in length upon the time of previous etherization, patients awaken in rational possession of their faculties, have no nausea or vomiting, unless the necessary manipulative trauma of the operative procedure has evoked such reflexes, and seldom encounter such dreaded post-anæsthetic sequelæ as acetonuria, uremia, acute dilatation of the stomach, pseudo-obstruction of the bowels or pneumonia.

Bunge: Experiences with Anæstheticum Novum (Erfahrungen mit Anæstheticum novum). *Deutsche zahnärztl. Wchnschr.*, 1913, xvi, 297.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Anæstheticum novum consists, pro ccm., of novocain, 0.02, suprarenin, 0.05, extract. cort. Hamamel, 0.01, Natr. chlorat., 0.0064, sterilized in the autoclave. It is prepared in Dr. Glärsner's apothecary shop in Kassel. In 900 cases of dental operations in which this anæsthetic was used the author observed complete anæsthesia without unpleasant accessory effects, such as swelling of the soft parts, after-pains, or late hæmorrhages. The time interval was one-half minute for the upper jaw, one to ten minutes for the lower jaw, and three to fifteen minutes to produce anæsthesia due to loss of nerve conduction with injections of one half to two ccm. HERDA.

Schütz: Magnesium Narcosis (Zur Kenntnis der Magnesiumnarkose). *Wien. klin. Wchnschr.*, 1913, xxvi, 745.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In animals subcutaneous injections of a magnesium salt produce narcosis which can be stopped by injections of calcium compounds. Kocher utilized these properties in the therapy of tetanus. Schütz's

investigations have led him to the following preliminary results: After a single injection of a non-lethal, sleep-producing dose of $MgSO_4$ or $MgCl_2$, magnesium could be demonstrated in the blood, liver, and in traces also in the brain. Repeated injections lead to a deposit in the brain which may be inhibited by calcium chloride. These relations remained uncertain in muscle. Sodium oxalate occasionally increases the sensitiveness to

magnesium. Experimentally the inhibitory action of calcium could be prevented by sodium oxalate. The experiments indicate that either small changes in the ionic cell content are enough for narcosis or the magnesium invades the cells only secondarily and is primary at the cell membrane. As yet nothing can be said as to the point of attack of magnesium. Some consider it central; others assume an action similar to curare. WEICHERT.

SURGERY OF THE HEAD AND NECK

HEAD

Spude, H.: Successful Treatment of Cancer of the Face by Simple Puncture with Ferrous Oxide (Erfolgreiche Behandlung von Gesichtskrebsen durch einfache Einstichlung von Eisenoxyduloxyd). *Ztschr. f. Krebsforsch.*, 1913, xiii, 139.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has succeeded in healing over ex-cochleated carcinomas of the face quite rapidly by injecting ferrous oxide into the base of the ulcer. The efficacy of this regional treatment was enhanced in one case of extensive carcinoma by the subcutaneous administration of atoxyl and arsenic. Spude expresses the hope that he may be able to heal inoperable or recurring carcinomas of the internal organs by the same principle, though with a somewhat altered technique as regards its application.

GENEWEIN.

Murphy, J. B.: Ankylosis of the Jaw — Interposition of Flaps from Mucosa of Mouth. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 3.
By Surg., Gynec. & Obst.

The patient, a man of 28, in July, 1909, had an abscess about a molar tooth in the right upper jaw. He was not treated for 3 weeks; at the end of that time the abscess was opened from within the mouth and cauterized. A week later an external incision was made. Only a little pus was evacuated. Shortly after the operation ankylosis began to develop and steadily grew worse. A year after the onset an operation was performed to relieve ankylosis, but was unsuccessful.

There are three types of ankylosis in the jaw; i. e., fibrous ankylosis, bony ankylosis and ankylosis arising from cicatrices outside the joint. The case described above proved to be of the extreme articular fibrous type. A solid band extended on the outer side from the upper to the lower jaw and clear back to the ramus. The anæsthetic was given through the nose, and the mouth was held open with a gag. The adhesions were separated very carefully with a scalpel and scissors, the finger being used as a guide. After much work, the mouth was opened wide. The tongue was drawn then to the opposite side and two flaps were interposed, one from the floor of the mouth and the other from hard palate. Both

were tongue-shaped, the lower 2 inches long and $\frac{1}{2}$ inch wide, the upper, 2 inches long and 1 inch wide. The base of the upper flap was directed toward the alveolar process, and that of the lower, toward the tongue. Both were swung out to cover the raw surface left by dividing the adhesions. The tips of the flaps were sutured to the inner margin of the gum and the cheek. All suturing was done with fine catgut, and no tension was exerted on the flaps.

L. J. MITCHELL.

Park, R.: Conclusions Drawn from a Quarter Century's Work in Brain Surgery. *N. Y. St. J. Med.*, 1913, xiii, 303.
By Surg., Gynec. & Obst.

The paper opens with a short history of the advance made in brain surgery. The author then takes up the various brain lesions and discusses the question as to whether there has been any advance in the treatment in the last twenty-five years. He states that the expectations have been much greater than the realizations. In the treatment of injuries of the cranium the results are gratifying. As far as the actual structure of the brain permits, the resources to-day leave little to be desired. He says further:—"In the treatment of *hæmorrhage*, spontaneous or traumatic, great advance has been made; in the treatment of *hydrocephalus* not so much; here the condition itself is almost insuperable. In the matter of technique a great advance has been made. We now have very nearly perfect contrivances for any manipulation which the construction of the parts may justify. Never until recently, for instance, have instruments been devised by which it appears impossible to injure the brain while perforating the skull. These, Hudson, of Atlanta, has finally succeeded in producing, and with them, as with forceps also of his device, the matter of raising osteoplastic bone flaps of almost any size or shape has been greatly simplified. With such instruments as these it is therefore a comparatively simple matter to carry out operations intended for decompression, which shall, in 'all probability, prove most effective in the relief of symptoms of brain pressure produced by lesions not permitting radical attack.

"The surgery of the *hypophysis*, and one or two other of the recent methods of attack for particular indications, are yet so recent as not to come within the scope of this paper. They give every indica-

tion of brilliancy and promise, but are still on trial."

The author comes to the following conclusions:

The surgery of *brain tumors* in general is still a disappointment, so far as radical measures are concerned. In all but a very small percentage of cases a decompression operation will better serve the purpose. With regard to *abscess*, precisely the same statement cannot be made, because here, unless the focus is found, practically nothing is accomplished; but the localization of this focus is but slightly more accurate than formerly. In the matter of the *lepties* and the *psychoses* the operative measures are ample, and the technique sufficient save in one respect, the prevention of fresh adhesions. Far more accurate notions regarding etiology are needed, and better discrimination between surgical and non-surgical cases.

Intracranial surgery has then made a great advance, but the hopes raised in 1888 have not yet been fully realized in 1913. EDWARD L. CORNELL.

Nowikoff, W. N.: A New Way of Attacking the Hypophysis (Ein neuer Weg für Eingriffe an der Hypophyse). *Zentralbl. f. Chir.*, 1913, xl, 1000.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Nowikoff has modified the Linenkoff method of temporary resection of the superior maxilla and the nose and worked out a method which renders a broad access to the hypophysis, to the under surface of the pons, and to the elongated medulla. The procedure is as follows: An incision in the skin is made over the zygomatic arch, along the lower border of the orbit, over the root of the nose, and down along the opposite border of the nose around the nostril to the midline. The upper lip is divided in the median line. The periosteum is separated from the lower orbital wall to the inferior orbital fissure. The bone is separated from the tear sac and the zygomatic bone with its two frontal processes is then exposed. The zygomatic arch and the frontal processes are divided. The bony framework of the root of the nose is sawed through after the introduction of a Gigli saw. A longitudinal incision is made in the mucous membrane of the hard palate of the opposite side and the bone and the apertura pyramidalis are divided with a chisel.

The nasal septum is divided from the opening at the root of the nose. The maxillary bone and the nose can then be liberated from their bed, and this allows a broad access to the base of the brain. The sphenoidal sinus comes clearly into view and its anterior wall is chiseled away. By means of a conchotome, the other wall of the sphenoidal sinus is then removed in toto. This exposes the upper wall of the sphenoidal sinus which at the same time is the floor of the sella turcica. This is carefully opened for a short distance. When the operator has made sure that the cavernous sinus is not immediately above it, the opening is enlarged sufficiently to expose the hypophysis. Without much difficulty the body of the sphenoid bone and of the basal part

of the occipital bone can be removed to expose the lower half of the pons and the elongated medulla. After the superior maxilla and the nose have been replaced, the base of the brain can be drained to the outside. The author has performed this operation so far only on the cadaver. WOLFSOHN.

NECK

Von Mutschenbacher, T.: The Treatment of Scrofulous Lymphatic Glands of the Neck (Wie behandelt man skrofulöse Halslymphdrüsen)? *Berl. Klin.*, 1913, xxv, 1.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author's experience includes about 1500 cases of lymphomata colli which he observed at the Réceis clinic in Budapest. Of these, 121, or 9 per cent, were operated upon. The others were treated conservatively. There are three types of this disease, each of which calls for a particular method of treatment. Type I is characterized by short, hard, non-caseous lymph glands. Of this kind were 74.5 per cent of the cases. Nutritious diet, iron and arsenic preparations, climatic treatment at the seashore or in the mountains, sunlight and Röntgen-ray treatment give quick and good results. If the glands soften they should be punctured. External applications (iodine and mercury ointments) and poultices should not be used. Type II is characterized by closed and suppurating glands. Of this form were 17.2 per cent of the cases of this disease. Since, after free incision, healing takes place very slowly and leads to deforming scars, treatment ought to be restricted to puncture followed by injections (the author recommends iodoform in glycerin). Only in those cases that are complicated by other manifestations of tuberculosis (lupus, laryngeal, or bone tuberculosis) should an open incision be made. In Type III the glands are suppurated and form fistulous tracts through the skin. They should not be excised, curetted, nor cauterized. Sunlight and general treatment give very good results. The application of green soap is recommended.

In all cases of glandular involvement of the neck Waldeyer's lymphatic ring in the pharynx should receive attention and appropriate treatment.

POSNER.

Mansfeld, G.: The Effect of Thyroid Gland upon Blood Formation; a Contribution to the Physiology of the Thyroid Gland. Number 2 (Blutbildung und Schilddrüse. Beiträge zur Physiologie der Schilddrüse. Mitteilg. 2.). *Arch. f. d. ges. Physiol.*, 1913, clii, 23.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Mansfeld attempted to discover by means of experiments on rabbits whether the effect of a lack of oxygen on the formation of blood is to be attributed to increase in the activity of the thyroid gland. In normal animals he noted the well-known effect of high altitude upon the number of erythrocytes, but in animals whose thyroid glands had been

removed the increase did not take place. The regeneration of the blood after phenylhydrazin anæmia was much less proportionally in animals whose thyroid glands had been removed than in normal animals, this difference being most marked at high altitudes (5 per cent in abnormal animals as compared with 63.2 per cent in normal animals).

The hæmoglobin of the blood increased at a high altitude in normal animals but decreased in animals without a thyroid. The regeneration of the hæmoglobin he found was not parallel to that of the erythrocytes but it took place at a high altitude even in animals without a thyroid. Carbot's serum from animals without a thyroid was as effective as that from animals that were normal. The use of this serum caused a decrease rather than an increase in the red blood cells in animals without a thyroid. Thyroid extract several days after Mansfeld had ceased administering it caused a marked increase in the red blood cells. From two metabolism experiments carried on after the discontinuance of the administration of the thyroid extract and in which there was noted an increase in the red blood cells but no increase in the nitrogen excretion, the author concludes that thyroid material does not directly influence either the nitrogen output or the nitrogen retention. Six other metabolism experiments showed that the decomposition of albumin caused by the lack of sufficient oxygen, which the author attributed to increased thyroid activity, did not recur when the supply of oxygen was further limited. Mansfeld concludes from this fact that when the deficit of oxygen is slight it causes a stimulation of the thyroid activity, but when it is more pronounced and of longer duration it inhibits the thyroid activity. This conclusion agrees with those of Reich and Blauel.

Mansfeld's conclusions are as follows: High-altitude anæmia and Carnot's serum cause a new formation of red blood cells (as does the administration of thyroid). This depends upon the stimulation of the thyroid and an increased secretion. New formation of erythrocytes, which depends upon the stimulation of the bone marrow by the thyroid secretion, therefore, takes place only when the thyroid is active. The albumin that is retained after the discontinuance of the administration of thyroid is used in the formation of the new red cells. An increase in erythrocytes does not take place during the administration of thyroid or during a period of hypersecretion, since at this time there is an albumin deficit. All of Mansfeld's findings need clinical confirmation. KOCHER.

Solaro, G.: Osteosarcoma of the Thyroid Gland (Ostéosarcome de la glande thyroïde). *Clin. chir.*, 1913, xxi, 1101. By Journal de Chirurgie.

This rare observation is especially interesting from the point of view of pathological anatomy.

As in most of the cases so far reported, the osteosarcoma described by Solaro developed in a gland that was already diseased (goiter). It affected the

left lobe and it was possible to readily enucleate it like a goiter. An infiltration, however, recurred with great rapidity.

Histologically this growth was an osteosarcoma similar to those that occur in bones. The sarcomatous tissue is the youngest and most active part of the tumor and by successive modifications it changes to osteoid, bony, and cartilaginous tissue. In the recurring tumor there were found sarcoma cells almost exclusively with but little bone and no cartilage.

The osteosarcoma may have had its origin in an osteogenic rest in the thyroid derived from the bronchial apparatus, but the author prefers to consider it a direct metaplasia of the connective tissue.

PIERRE FREDET.

Gatti, G.: Echinococcus Cyst of the Thyroid (Kyste à échinocoques de la thyroïde). *Clin. chir.*, 1913, xxi, 713. By Journal de Chirurgie.

A hydatid cyst of the right lobe of the thyroid of 20 months' duration was observed in a child of five. An attempt was made to enucleate the cyst proper and its capsule, but it ruptured and thyroid tissue had to be removed.

The author makes a critical study of the literature of the subject and, as treatment, advises in order of preference, enucleation, partial resection of the thyroid or marsupialization.

Attention is called to the fact that Gatti uses the term "enucleation" in a sense different from that in which it has been used since the work of Delbet. Gatti speaks of enucleating the extraparasitic sac formed to wall off the parasite. This, as in hydatid cysts of the liver, would be radically impossible. One may agree with Gatti, however, if the latter proposes enucleating the hydatid cyst proper, which, in the case cited, could have been easily accomplished as there were no adhesions between the cyst wall proper and the thyroid capsule surrounding it.

PIERRE FREDET.

Jamin, F.: The Combination of Thyreoses and Nephroses (Über die Kombination von Thyreosen mit Nephrosen). *Deutsche Ztschr. f. Nervenheilk.*, 1913, xlvii-xlviii, 255 (Festschr. von Strümpel).

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author describes cases in which a more or less definite picture of thyreosis was accompanied by definite disturbances in the kidney. That this was not merely a coincidence was proven by the effect that the one exerted upon the other. The mildest cases were represented by the so-called orthostatic albuminuria, especially that occurring in young girls. Although this condition is frequently designated as chlorosis, the accompanying rapid enlargement of the thyroid gland and the blood picture proves that it belongs to the group of thyroid disturbances. Besides the thyroid, also other organs of internal secretion may be involved and may produce symptoms difficult to interpret.

In many cases disturbances of development

are soon noted. In fully developed hyperthyroidism, disturbances in the kidney belong to the clinical picture. These cannot be attributed to the cardiac injury alone; they must have some specific cause. They may come and go with the change in the severity of the disease. In one case that is described in detail the thyreotoxic patient had a very unstable nervous system and a prolonged increase in the blood pressure. He suffered also a continued disturbance in the kidneys that was manifested by albuminuria and polyuria. Two other cases showed similar findings. Common to both was the thyreosis, together with the symptoms of a status thymolympathicus, hypertrophy of the left ventricle, prolonged increase in the blood pressure, and kidney disturbance. The female sex of mature age seems especially predisposed. The increased blood pressure may be borne for years.

The pathogenesis is not definitely known. It is highly probably that a disturbance of internal secretion is the primary factor. Accidental injury to the kidneys by infection or toxic agents cannot, of course, be absolutely excluded, but the kidney disturbance will be much more severe if the sympathetic and autonomous nervous system has become hypersensitive by reason of the thyreosis. The high blood pressure in these cases appears to be due to an increased peripheral resistance which is of a functional rather than a morphological character. Atherosclerosis is not a factor; the vascular system is still capable of adapting itself and it is for this reason that the increased blood pressure can be well borne. As to whether an internal secretion of the kidney enters into consideration cannot be stated at this time; such a secretion should manifest itself by a stimulating action upon the suprarenals. In the observation that thyreotoxic symptoms may occur in old people with contracted kidneys and hypertension, a parallel is found to the cases described.

The therapy demands much care; these patients do not stand operation as well as others. Ligation of the vessels may be attempted first. Digitalis is not of use.

LEBENHOFFER.

Mayo, C. H: Surgery of the Thyroid; Observations on Five Thousand Operations. *J. Am. M. Ass.*, 1913, lxi, 10.

By Surg., Gynec. & Obst.

Sporadic, endemic and epidemic goiters are found in all parts of the world, among all people and most animals. As yet we have no knowledge of a specific infecting agent which can be regarded as the causative factor in the production of goiter. The work of the Goiter Commissions and the reports of those observers who have made a study of the etiology of goiter make it quite apparent that, whatever the agent, it seems to be more readily conveyed by water than by any other medium, although water is probably not the sole carrier. The more recent progress in the non-surgical treatment of goiter seems to indicate the use of thymol, salol and iodine as intestinal antiseptics. Thyroid gland has an uncertain potency, yet apparently produces favor-

able results in the early treatment of simple goiters. In exophthalmic goiter temporary improvement may be obtained by the use of the X-ray. The cytolytic serums for specific action on the thyroid have not borne out in results the expectations of the medical profession. The thymus gland and the thyroid are undoubtedly intimately associated in the growth and development of early life. The thyroid may be of great size in advanced middle age, compressing the trachea at, or just above, the bifurcation. Such complications are more common and more grave in goiters of the hyperplastic type. Large right-sided goiters frequently produce paresis of the left recurrent nerve, and it is therefore advisable to make a laryngoscopic examination before doing a thyroidectomy. Extensive exposure of the nerve is advisable only in an operator's early experience, or in operating on nodular thyroids which extend beneath the trachea and have displaced the nerve. The scar tissue which results from the traumatism of a free exposure may lead to secondary paresis. In performing thyroidectomy the best exposure to be obtained is through a transverse incision low in the neck, the skin and platysma turned together both ways from the incision. Should further exposure be necessary the sternohyoid can be sectioned high in the exposed area. In simple goiter it is best to extirpate a greatly enlarged lobe. If both lobes are symmetrically enlarged, division of the isthmus with double resection of glands is indicated for the best cosmetic results. Midline, encapsulated adenomas should be enucleated with division of the isthmus. Lateral encapsulated adenomas may be enucleated or the whole lobe extirpated. If symptoms of hyperthyroidism are present extirpation is indicated. Excluding malignancy the mortality in operating on goiters is very low (1-3) and varies but little in the so-called simple goiters, in which class are included occasional complications, and the cases of so-called exophthalmic goiter with hyperplastic glands. In the 5000 operations on the thyroid in the clinic at St. Mary's Hospital during the 25 years ending May 14, 1913, there were 2396 operations for simple goiters which included 11 transplantations in cretins, 59 operations for malignancy (52 carc., 7 sarc.), and one for syphilitic thyroid. There were 2295 operations for exophthalmic goiter and 309 early operations which were not classified.

In discussion, CRILE confirmed Mayo's conclusions by his own experience, having operated over eight hundred cases of goiter of all types and varieties. He has seen a few cases in which cancer of the thyroid, not suspected before operation, but found by the pathologist, was cured. The safety of the operation for colloid goiter is so great at the present time that, if the patient demands operation, one is justified in removing the gland for cosmetic reasons. The care Mayo suggested in the preservation of the voice is excellent. Crile has found that one may take out the entire lobe, carrying the dissection right to the edge of the capsule, using small hæmostats, and keeping a bloodless field so that one can see

the lymph vessels as they run out of the gland from beginning to end of the operation. In this way it would be impossible to remove either a parathyroid or to injure the recurrent laryngeal nerve.

Passing to another subject, he wishes that a commission might be appointed for the purpose of investigating the adolescent period of children living in goitrous districts. Crile believes that the syrup of ferrous iodid in five minim doses, three times daily, for periods of a month during every year, will control nearly all cases of simple hypertrophy. One of the factors in the production of adolescent goiter lies in the geological change in the constituents of the earth where iron is not found as it once was. He finds that clinically one can make a very accurate prediction of the pathological condition in the gland. There is no more doubt in his mind as to the benefits of operation for exophthalmic goiter than of opening the abscess. Patients confirm that view, and the clinics have grown not through references by physicians, but through references by patients.

He believes that there is a general feeling not only among surgeons, but also among patients, that exophthalmic goiter is a disease that should not be allowed to go on until the stage of degeneration is reached. Crile believes that the late results of the disease are largely under control. One can operate now and control the hyperthyroidism by the principle of anoci-association, and not have a single change for the worse at the end of the operation, no matter how severe the case, how large the gland, or how rapid the pulse rate.

Porter: Injection of Boiling Water in the Treatment of Hyperthyroidism. *J. Am. M. Ass.*, 1913, lxi, 88. By Surg., Gynec. & Obst.

Porter's experience in the treatment of angiomas by the injection of boiling water, as first advised by Wyeth, led him to use this method on three classes of cases:

1. Patients too sick to be safe surgical risks, and those having dividing or substernal goiter the removal of which would be extra-hazardous.
2. Patients presenting mild symptoms.
3. Patients who refuse, major surgical procedures.

He has treated over twenty cases, representing in all more than one hundred injections. From one to three injections were given at each treatment, of from 40 to 230 minims. The injection of boiling water into the thyroid gland is a safe procedure. The immediate effect of the injection is destruction of thyroid tissue and colloid. Further destruction of thyroid cells results from the formation of fibrous tissue consequent to the injection. L. G. DWAN.

Dufour, P.: Two Cases of Hemithyroidectomy for True Exophthalmic Goiter of Tubercular Origin (Deux cas d'hémithyroidectomie pour goitre exophthalmique vrai d'origine tuberculeuse). *Lyon med.*, 1913, cxx, No. 14. By Journal de Chirurgie.

Dufour reports two cases in which Leriche performed a partial thyroidectomy for exophthalmic

goiter. The first was that of a patient 41 years old who had had an enlarged left lobe for two years with palpitation, tremor, diarrhoea, and tachycardia but only slight exophthalmus. Fifteen days after a partial thyroidectomy had been performed only the tachycardia remained and this was improved. The second case was that of a patient 33 years old who had had a goiter since she was 19. Symptoms of Basedow's disease appeared in September, 1910. In May, 1912, she had an acute Basedow's disease and after symptomatic treatment to improve her condition she was operated upon in August, 1912, under local anæsthesia. The tachycardia and nervousness have disappeared but after five months the patient still has a slight tremor although she is otherwise in excellent health. Four other partial thyroidectomies performed by Leriche and Poncet have had equally good results. Two of the patients have remained in good health for four years. The finding of tuberculous lesions in two cases tends to substantiate the statements of Poncet and Leriche that certain exophthalmic goiters are of tubercular origin. J. DUMONT.

Eppinger, H.: Basedow's Disease (Die Basedowsche Krankheit). *Handb. d. Neurol.*, 1913, iv, 1. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The article is a discussion of Basedow's disease on the basis of our present knowledge and the author's own studies of the condition. After enumerating in detail the well-known symptoms and weighing their relative importance, the author enlarges on his own theory. Eppinger believes that the theory of Klos and his co-workers, that the condition is a dysthyreosis, is incorrect. The investigations of A. Kocher, as well as other considerations, force us to retain the theory that it is a hyperthyroidism. Special reference is made to Kocher's nuclear lymphatic centers in goiter tissue. Persistent thymus and Basedow's disease are not necessarily associated.

The paragraph on differential diagnosis is comprehensive. Typical cases are easily recognized. Atypical forms presenting only one or two symptoms can be classified as sympatheticotonic or vagotonic.

Other subjects discussed are: The relation of the thymus to Basedow's disease, struma basdificata, the various cardiac findings in goiter, glycosuria in Basedow's disease, Kocher's "Jodbasedow," and Basedow's disease in children. The numerous complications of the disease can best be studied from the original article. Considering the brilliant operative results of Kocher, with 76 per cent cures, the author recommends the surgical treatment decidedly. However, removal of the thyroid is not without risk. Even Kocher reports a mortality between 3.4 and 6.7 per cent. Recurrences are not rare. A vascular appearance of the goiter constitutes an indication for operative therapy. X-ray treatment should not be used. Although the best results are obtained by operation, internal therapy is by no means valueless. A dietetic-hygienic régime is essential. Of medicinal remedies the au-

thor has successfully used atropin sulphate in pills (0.00025) two to three times daily, especially in cases with severe diarrhoea. Injections of adrenalin are suggested; 20 to 30 drops in 250 gm. of warm water should be allowed to flow in slowly for 5 to 10 minutes. Calcium carbonate is also recommended. If there is no improvement at the end of from one

to three months under medical care, operation is indicated. The author supports Mayo's suggestion to give atropine (belladonna) before a general anæsthetic is administered, for he believes that the so-called "thymus-death" is nothing more nor less than a result of shock which seems to affect principally the vagus. EUGEN SCHULTZE.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Evans: Cancer of the Breast. *Practitioner*, Lond., 1913, xci, 7. By Surg., Gynec. & Obst.

The author believes the mode of local extension of carcinoma is best described by the term "infiltration process" since it travels by way of the lymph channels, and does not spread like a wave from a central focus, as would be implied by the term "permeation." Attention is directed to the clinical importance of the inconstant, deep, paramammary lymphatic gland situated at the outer border of the breast. When secondarily invaded it may lead to the belief that two primary foci exist. Other diseases may involve it and thus lead to confusion in diagnosis. Retraction of the nipple or tissue of the breast is not in itself an indication of malignancy, but if gentle fondling of the breast fails to cause a contractile response of the nipple, we have a sign of some value.

The teaching that "chronic interstitial mastitis may become malignant" is considered unsound by the author for the reason that fibrous tissue cannot revert to a proliferating cellular growth. He is using lactagol as an aid in differentiating malignant growths from chronic interstitial mastitis with some success.

Interesting papillary growths from the ducts—either intracystic or protruding—are to be considered in the differential diagnosis of carcinoma. Also in every case, the involvement of supraclavicular lymph glands, secondary to either carcinoma of the breast or to carcinoma elsewhere in the body, should be carefully sought for.

The author believes that early, thorough, radical removal, which includes the pectoralis major muscle as well, is the only course to pursue. F. B. RILEY.

Ritter: The Prognosis of Cystadenoma of the Breasts (Zur Prognose des Cystadenoma mammæ). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 679. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Following the removal of both breasts on account of a cystadenoma, a carcinoma developed in the axilla, which is now recurring. At the time of the removal of the cystadenoma, microscopic examination revealed no indications of a carcinoma within it.

The author explains the extraordinary growth as follows: In seven cases operated upon for cystadenoma, he found lymph glands in the

axillary space which seemed to be still in a state of development and of a type that occurs only in cancer of the mammary gland. The presence of these growths in the cases described makes it seem probable that, though cystadenomata are generally benign, they nevertheless possess characteristics of malignant tumors which may cause the development of cancer after they have been removed. Ritter therefore advises the extirpation of the regional lymphatic glands in every case of cystadenoma of the breast. ZINSSER.

Gourdon: Bilateral Sterno-Clavicular Dislocation of Congenital Origin (Luxation sterno-claviculaire bilatérale, d'origine congénitale). *Rev. d'orthop.*, Par., 1913, iv, 304. By Journal de Chirurgie.

In this article Gourdon reports the case of a boy of 15 who was suffering from a slight dorsal kyphosis and bilateral sterno-clavicular dislocation. The dislocation was complete. Gourdon points out the difference between a luxation of this kind and the subluxations often noted in young girls. In the case reported it was possible by palpation to twist the entire internal end of the clavicle around. The movements of the sterno-clavicular articulations were much exaggerated and sluggish. The attention of the boy and his parents had never been drawn to the luxation of the articulations. Gourdon believes that although the dislocation was not noticed until late, it was a deformity of congenital origin and was due to the absence of interarticular fibro-cartilage. We believe, rather, that it was the result of an atrophy of the osseous extremities and a malformation of the articulations and the entire ligamentous connection.

The prognosis is bad, as the deformity has a tendency to become exaggerated and it is difficult to correct by any method (arthrodesis, resection of the clavicle, bandages, pressure, or casts, etc.).

Gourdon recommends no therapeutic treatment for such cases. The projection of the clavicle is of little importance if, as in the case reported, the patient has the use of his limbs. ALBERT MOUCHET.

Schepelmann, E.: Thoracotomy and Hydrothorax (Thorakotomie und Hydrothorax). *Klin. therap. Wchnschr.*, 1913, xx, 681.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has conducted a series of experiments on animals to verify the conclusions of Teske as to

the effects of artificial hydrothorax. Single and double pneumothorax were produced in guinea pigs under the influence of morphine. Observations were then made of the frequency of respiration after removal of the pressure, and also after the injection of physiological salt solution and olive oil into the pleural cavities under normal pressure. With unilateral pneumothorax and normal pressure the type of respiration was favorably influenced to a slight degree by the injection of salt solution, and to a greater degree by the injection of oil. The good effects were more marked when the quantities of the fluids injected were large (several tablespoonfuls). When both pleural cavities were opened neither the salt solutions nor the oil had any effect upon the rate of respiration.

The explanation given by Schepelmann for these phenomena is as follows: In unilateral pneumothorax the weight and pressure of the injected fluid puts the mediastinum at rest and does away with the injurious mediastinal fluttering, so that the normal lung can breathe quietly. When both pleural cavities are opened mediastinal function is suspended and, as a result, the beneficial effects of injections of fluids have no chance to manifest themselves. The results of the author's experiments do not agree with the theories of Teske either with regard to the effects of artificial hydrothorax or to the explanations in general. Nevertheless, Schepelmann advises, beside the free opening of the thorax, the injection of warm physiological salt solution into the pleural cavities to prevent the harmful drying of the endothelial surfaces of the pleura, and to minimize the danger of infection. At the end of the operation a decided increase in pressure of the fluid washes out any germs that may have entered. Moreover, the salt solution remaining in the chest is more easily and quickly absorbed than the air in a pneumothorax.

DENK.

Schur, H., and Plaschkes, S.: The Indications for Artificial Pneumothorax in Pulmonary Tuberculosis (Zur Indikationsstellung der Pneumothoraxbehandlung bei Lungentuberkulose). *Wien. klin. Wchnschr.*, 1913, xxvi, 961.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors briefly report their experiences with the pneumothorax treatment in cases of pulmonary tuberculosis. The best results were obtained in severe cases that showed marked involvement of one side only. The general condition improved rapidly, the temperature fell, and the appetite increased. In general, the results obtained by the authors with insufflation of nitrogen were similar to those of other investigators: no actual cures were observed. An exudative pleurisy was frequently observed but it always disappeared later.

The authors conducted experiments on animals to determine the cause of the favorable influence of pneumothorax upon tubercular lungs. The results showed that the compressed lung can be infected artificially with tubercle bacilli introduced intrave-

nously or by inhalation quite as readily as the healthy lung, and that therefore the favorable influence of the treatment is due, not to the compression, but to the changes in the connective tissue of the lung that occur in the period of pneumothorax compression.

From these results, as well as from the clinical findings, the authors conclude that in mild cases without severe general symptoms no improvement can be expected from the insufflation of nitrogen. When the constitutional symptoms are severe, however, and are due principally to involvement of one lung, this treatment is of value, since in such cases, by reason of the compression of the lung and the resulting blocking of the blood and the lymphatic circulation, the absorption of toxins is made much more difficult. Advanced involvement of the other lung, cardiac defects, kidneys affections, and extensive pleural adhesions are contra-indications to the treatment.

DENK.

Kaufmann, K.: The Technique of Artificial Pneumothorax (Zur Technik der künstlichen Pneumothorax). *Internat. Zentralbl. f. d. ges. Tuberkul. Forsch.*, 1913, vii, 320.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kaufmann gives Brauer's method of incision the preference over the method of puncture. The disadvantages of the former are the occurrence of tissue emphysema, which is seldom absent, and the formation of pulmo-cutaneous fistulae when the procedure is not successful. Kaufmann mentions two personal observations of these unfortunate complications. He has attempted to overcome the deficiencies of both methods. His procedure, which is practical and has obtained good results for the last three years in the sanitarium at Schönberg, is as follows:

The skin and also the underlying tissue are well infiltrated with the anæsthetizing fluid as far as the periosteum of the inner margin of the upper rib. A trocar, the lumen of which just fits a Salomon's cannula approximately 2.5 mm. in thickness, is then plunged in up to the infiltrated rib near its inner border. The stylette is withdrawn and the Salomon cannula is inserted up to a certain mark on the trochar, which is well fixed on the rib. The patient is then told to breathe deeply. At the same time under gentle but steady pressure the trochar with the cannula is inserted into the intercostal space. The blunt point of the cannula thereby insinuates itself between the bundles of intercostal muscles. The tense pleura is penetrated with one stroke, the cannula being held somewhat obliquely. The lateral opening of the cannula, the position of which is indicated on the mark above mentioned, should be turned toward the pleural opening either above or below. A soft sound is used to determine whether the free cavity has been reached. Oxygen should always be introduced first. For this purpose a small modification of Brauer's nitrogen apparatus is essential. The latter is described by means of a diagram.

SCHUMACHER.

Tuffier, T.: Final Result of an Intrathoracic Subpleural Graft in a Case of an Intrapulmonary Suppurative Cavity on the Right Side (Résultat éloigné d'une greffe intra-thoracique sous-pleurale dans un cas de cavité suppurée intrapulmonaire droite). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 740.
By Journal de Chirurgie.

Tuffier reports the case of a patient who had a depression in the bony framework of the thorax which was due to a large intrapulmonary cavity caused by gangrene. He remedied the depression by grafting into the pleural cavity a large lipoma that had been preserved on ice. At the present time, two years later, the patient is in the best of health; the thorax is symmetrical, the cicatrix elastic, white, and without adhesions. There is no purulent expectoration and on auscultation there are no abnormal sounds. The patient works without fatigue or pain.
J. DUMONT.

TRACHEA AND LUNGS

Derjushinsky, S. E.: Artificial Breathing Continued Successfully for Fifteen Days (Erfolgreiche ununterbrochene künstliche Atmung im Laufe von 15 Tagen). *Verhandl. d. XII. Kong. russ. Chir.*, 1913, xii, 208.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Derjushinsky reports the only case that is known of artificial respiration continued successfully for fifteen days. The patient had pain in the neck and after six days was admitted to the hospital with paresis of all the extremities and facial paralysis on both sides, bilateral lagophthalmos, and paresis of the muscles of mastication. The pupil reflex was weak, and Babinsky's reflex was noted. The temperature and the condition of the internal organs were normal. At the end of two weeks there was complete paralysis of all extremities and a gradual cessation of respiration. Artificial respiration was then begun, and as spontaneous breathing did not return it was continued for fifteen days without interruption. For the first three days the pulse was rapid (100-150); from the fifth day on, it was normal. Spontaneous breathing began again after fifteen days, but stopped after five days. Artificial respiration was then carried on for three days longer, after which normal breathing was resumed. For the following three weeks the patient suffered from croupous pneumonia and intestinal paresis. Muscle atrophy was marked, but it disappeared completely, though slowly, after massage and electrical treatment. In four months the patient was discharged. She has been well ever since (eleven months).

HESSE.

Petrén, G.: Pulmonary Embolism as a Cause of Post-Operative Death (Studien über obturierende Lungenembolie als postoperative Todesursache). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 606.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After a brief historical review, the author draws conclusions from a study of a vast amount of mate-

rial, some of which is his own. Death from pulmonary embolism occurs most frequently after laparotomy. One per cent of those operated upon for myoma, the same percentage of those who undergo laparotomy, and about two-tenths per cent of those operated upon for hernia die of this condition. Embolism is as frequent in one sex as in the other. It does not occur before the fifteenth year. It is common between the thirtieth and forty-fifth years, and most frequent in later years, regardless of the general condition of the patient. Vascular changes constitute an important etiological factor, but are by no means a constant finding.

Petrén next discusses the pathological anatomy, the localization, and the origin of embolism. Two-thirds of the fatalities occur between the fourth and fourteenth day after operation. In the case of patients in whom a positive diagnosis of thrombosis has been made, the danger is relatively less. Slight embolism may now and then precede the appearance of a thrombosis that is already present but has not yet been diagnosed. Mahler's symptom was not typical in any of the author's cases, and only exceptionally does it precede the appearance of an embolism that is fatal. It is quite improbable that embolism is caused by infection. On the other hand, cardiac weakness is often noticed in this condition. Also changes in the blood itself are, no doubt, contributory. The prophylaxis consists largely in preventing the formation of thrombus. This can be accomplished by early rising after operation, stimulation of the heart, respiratory exercises, and free evacuation of the bowels. When thrombosis has already developed, absolute rest is imperative. This must be required also in cases in which thrombosis is merely suspected. In conclusion the author discusses Trendelenburg's operation, and reports observations made in some of his own cases.
JEHN.

HEART AND VASCULAR SYSTEM

Jacob, O.: The Treatment of Tubercular Pericarditis by Pericardotomy Without Drainage (Traitement de la péricardite tuberculeuse par la péricardotomie sans drainage). *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 752.
By Journal de Chirurgie.

Jacob recalls that two years ago Rochard made a report to the Society in regard to a patient suffering from tubercular pericarditis with a great sero-hæmatic effusion. A pericardotomy without drainage was performed on this patient and the recovery was uneventful. Recently Jacob had the opportunity to perform again the same operation on a young soldier suffering from tubercular pericarditis. In this case also the patient was entirely cured.

There are, therefore, two reported cases of tubercular pericarditis that have been treated and cured by pericardotomy without drainage. These two cases seem to be important and to speak in favor of the treatment and technique that Jacob recommends.
J. DUMONT.

PHARYNX AND ŒSOPHAGUS

Guisez: Congenital Stenoses of the Œsophagus
(Les sténoses congénitales de l'œsophage). *Rev. méd.*, 1913, xxi, 262. By Journal de Chirurgie.

Congenital stenosis of the œsophagus is rare. Guisez observed only 4 cases of it in 1400 œsophagoscopies. In all of these cases it occurred in the region of the cardia and all of the patients were males from 10 to 30 years old. Each case had been previously diagnosed as a grave spasm of the œsophagus, but the spasm in reality was only secondary to organic stenosis.

Œsophagoscopy, which is the only means by which an exact diagnosis can be arrived at, has shown the same thing in each case. In the region of the cardia there is a sort of valve, more or less inflamed, modified by œsophageal peristalsis but preserving always its characteristic appearance and its easily recognizable sharp border. It is impossible to confound these congenital strictures with spasms of the œsophagus, in which the orifice is contracted and serrated, or with the inflammatory stenosis, in which there is no valve-like appearance, or with pressure stenosis, in which one of the walls of the œsophagus is pressed upon by a tumor and the lumen acquires the shape of a half-moon or a cross.

The prognosis is grave but depends essentially on the degree of stenosis and the treatment.

The treatment used was as follows:

1. The œsophagitis, which in all stenoses has a bad effect, was reduced. This reduction was accomplished by proper diet and by lavage of the œsophagus four times a day with an alkaline water with the aid of a Faucher tube.

2. The opening was dilated by olivary filiform bougies. A fine bougie was left in for several hours to make a passage.

3. It is nearly always necessary to actually cut the valve by œsophagotomy. In the author's last three cases he used circular electrolysis. In these instances the congenital stricture was accompanied by a slight cicatricial stenosis, and the

electrolysis gave results that could not have been obtained by œsophagotomy.

When enough of the valve is destroyed and the œsophagitis has been reduced by alkaline lavage and proper diet, there is but slight chance that the stenosis will recur. In all of the cases reported by Guisez alimentation rapidly became normal.

J. DUMONT.

Gesselewitsch: A Case of Œsophagitis Dessecans Following Poisoning by Acetic Acid (Ein Fall von Œsophagitis dessecans nach Essigsäurevergiftung). *Russk. Vrach*, 1913, xii, 771.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the seventh day after taking acetic acid the patient ejected during an attack of vomiting the mucous, submucous, and part of the muscular, layers of the œsophagus. The structures retained their tubular form. Twenty cases of œsophagitis dessecans have been described in the literature, but no case following poisoning by acetic acid. The author believes that the occurrence of this condition would be noted more frequently if the vomitus were more carefully examined.

JOFFE.

Rotch, T. M.: Types of Occlusion of the Œsophagus in Early Life. *Am. J. Dis. Children*, 1913, vi, 1. By Surg., Gynec. & Obst.

This article is a report of three cases of occlusion of the œsophagus and is well illustrated by X-ray pictures. The first case was that of a boy 25 months old. The stricture was very tight. Gastrostomy was performed but the child died.

The second case was in a girl 10 years old. Orange pulp and a penny were found in the œsophagus. The œsophagus was very much dilated in the lower third; at a distance of 25 centimeters from the teeth there was a stricture one-half centimeter in diameter. The stricture was dilated with the œsophagoscope and the patient recovered.

The third case was that of a boy five and three-quarters years old and was really a spasm of the œsophagus.

CLIFFORD G. GRULEE.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Murphy, J. B.: Desmoid Tumor of Rectus Muscle. *Surgical Clinics of John B. Murphy*, 1913, ii, No. 3. By Surg., Gynec. & Obst.

A woman of 31 entered the hospital on account of a tumor in the right rectus above the umbilicus. The tumor was first noted some 6 weeks previous as a hard and fairly movable lump. Six months before, during the last 3 months of pregnancy, she suffered more or less constant pain in the region of the tumor. The pain grew worse but disappeared after parturition. There had been no change in the size or consistency of the tumor in the past 6 weeks, and

it was never tender. The patient's personal history was negative. Her father, mother and brother had died of carcinoma.

At operation the mass was found to be the size of the index finger and to involve $\frac{3}{4}$ of the diameter of the rectus. It sprang from the posterior layer of the sheath and grew out into the muscle. On operation it was separated from the peritoneum without opening the latter. The recovery was uneventful. The stitches were removed on 14th day, and the patient was discharged on the 22d day, being advised to wear an abdominal support for some time to give the tissues every opportunity to unite solidly.

L. J. MITCHELL.

Propping, K.: Rehn's Treatment of Peritonitis (Die Rehn'sche Behandlung der Peritonitis). *Deutsche med. Wchnschr.*, 1913, xxxix, 1096.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

For appendicitis peritonitis Propping recommends Rehn's treatment, which consists in a median incision, irrigation, eventration, and drainage of the pouch of Douglas. The article is mainly a criticism of a comparison made by Scheidtmann of the method of Rehn with the method of Rotter. The latter consists of irrigation of the abdominal cavity and mopping without drainage. Statistics of the last two years show an improvement in Rehn's mortality percentage. It is evident from the article, however, that good results were obtained with both methods. The mortality in Rehn's cases during the last year was eighteen per cent, as against twenty-four per cent for the year previous; that in Rotter's cases was 21.8 per cent.

ISELIN.

Blecher: Camphorated Oil in Peritonitis and Abscesses in the Pouch of Douglas (Campheröl bei Peritonitis und Douglasabscess). *München. med. Wchnschr.*, 1913, lx, 1261.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author treated five cases of severe peritonitis, that occurred in fifty appendectomies, with one per cent of camphorated oil in amounts as large as 100 grams. The rapid improvement of the general condition and the ultimate recovery of all of the patients were attributed to the camphor treatment. In all of the cases an abscess was formed in the pouch of Douglas, which was also attributed to the camphor treatment. The oil checks the absorption, and a reflex inflammatory process that begins later causes an increase in the exudation. If there are no adhesions the exudate drains down easily between the oiled loops of bowel. The heavy exudate, covered by a fine coat of oil, is retained in the dependent parts, of which the pouch of Douglas is the lowest point. In two cases of acute paralysis of the stomach when the pelvis was elevated for a few days the formation of the abscess was delayed. Formerly the exudate from the pouch of Douglas was regarded as a favorable rather than an unfavorable symptom. To prevent such an exudate a glass or rubber drain, without gauze, should be inserted into the sac.

WORTMANN.

Härtel, F.: Tubercular Peritonitis (Die tuberkulöse Peritonitis). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 370.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author, reviewing the more recent literature, refers to 191 articles on the subject, which contain the latest ideas on the etiology, frequency, and prognosis of this condition. The greater part of his article is devoted to a discussion as to whether the condition should be treated surgically or by the non-surgical or so-called "conservative" method.

The author's personal opinion is as follows: "It seems to me that the patients on whom laparotomy is performed have a decided immediate advantage

over those treated by other methods, but the longer they are kept under observation afterwards the plainer it becomes that they gradually lose this advantage, and the prognosis becomes about the same as that for the non-operated patients. In any case, after laparotomy, careful internal and restorative treatment should be persisted in for a long period, if possible in a sanatorium, a requirement that in most cases is difficult to meet." Härtel's article is more of a compilation than an expression of opinion.

ISELIN.

Stocker, S.: The Employment of Tincture of Iodine in Dry Peritoneal Tuberculosis (Die Anwendung der Jodtinktur bei der trockenen Peritoneal-tuberkulose). *Schweiz. Rundschau f. Med.*, 1913, xiii, 745.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Stocker, after employing the hot air treatment in cases of peritoneal tuberculosis with unsatisfactory results, endeavored, following the suggestion of Hofmann, to obtain a more powerful hyperæmia by applying tincture of iodine to the peritoneum.

Experiments with rabbits showed that when the bowels were painted with tincture of iodine no adhesions were to be found when the abdomen was opened later; instead the surfaces were quite smooth. In six other rabbits the abdominal cavity was opened and a freshly prepared emulsion of tubercle bacilli was painted on the peritoneal surface of the bowel. In three of these cases the application of the emulsion was followed with a coat of tincture of iodine before the abdomen was closed. In the others no iodine was used. At the end of four weeks no tuberculous changes were found in the animals in which the application of iodine had followed the introduction of the tubercle bacilli, and there were no adhesions. The other three animals showed distinct tuberculous changes. To these last three animals tincture of iodine was then applied as it had been applied formerly in the other three cases. At the end of two weeks there were observed definite retrogression of the changes.

From these experiments the author concludes that tincture of iodine exerts a direct curative influence upon tuberculous processes; that the danger of the formation of adhesions as the result of its use is much exaggerated; and that the application of the tincture of iodine may be safely employed in the case of the human being. Stocker reports the case histories of two patients that he treated with good results. Contrary to Hofmann's observations, ascites did not develop in these instances. WEHL.

Russanoff, A. G.: Tubercular Peritonitis and Its Operative Treatment (Zur Frage der Bauchfell-tuberkulose und ihrer operativen Behandlung). *Dissertation*, Moscow, 1913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The first part of this dissertation is devoted to a careful survey of the literature, the pathogenesis, the etiology, and the symptomatology of tuber-

culosis of the peritoneum. The second part is a discussion of the operative treatment and the indications for operative interference. The author has had twenty-four operative cases, nineteen women and five men. According to his statistics, tubercular peritonitis occurs most frequently in women.

The prognosis depends on the character of the tubercular process and the involvement of other organs. Operation must be performed early, while the general condition is still good. Adhesions should not be broken up except in cases of intestinal obstruction. Eight of the author's patients that were operated upon died, two at the end of the second week, one at the end of a month, one after three months, three after six months, and two after one year. The cause of death in all of these cases was progressive tuberculosis. In nine instances the patients remained well for periods varying from two to five years. The prognosis is best in fibrous tuberculosis, and worst when caseous granulations are formed.

Dietary treatment, according to the author, is next in importance to operative treatment. Puncture of the abdomen should be substituted for operation only in those cases in which serious disturbances in respiration or circulation contra-indicate laparotomy. Mild attacks of the disease, especially in children, should be treated conservatively. In acute cases presenting the picture of acute suppurative peritonitis operation is indicated. If no serous exudate is found a tampon should be applied. Conservative treatment is best for dry peritoneal tuberculosis with adhesions. In conclusion the author gives ninety references from the literature.

HESSE.

Friedman, L.: Retrograde Incarceration — Hernia "en W." *Surg., Gynec. & Obst.*, 1913, xvii, 97.
By *Surg., Gynec. & Obst.*

In the type of strangulation known as "retrograde incarceration," the incarcerated portion of a herniated organ lies, not in the hernial sac, but within the abdomen near the hernial constricting ring, while that part of the organ lying toward the periphery from the hernial orifice and within the sac is nearly normal or usually shows evidence of only moderate interference with its blood supply. The organs involved may be the appendix, fallopian tube, Meckel's diverticulum, omentum, and intestine (most often the small intestine). When the intestine is involved, two or sometimes three distinctly separate loops of gut are found in the hernial sac, while the incarcerated loop, or so-called "connecting loop," is within the abdomen near the hernial orifice.

Thrombosis of the mesenteric vessels and hæmorrhagic infarcts in the mesentery are present in severe cases of "connecting loop" incarceration. Clear, turbid, or bloody fluid is present in abdomen. The symptoms and diagnostic signs depend upon the length of the incarceration, and are as follows:

1. Large-sized tumor in scrotal region, sometimes asymmetrical.
 2. Colicky pain in lower abdomen on the side of the hernia; pain on pressure on side of hernia, immediately above Poupart's ligament.
 3. Rigidity above Poupart's ligament on side of hernia.
 4. Local tympany.
 5. Presence of sausage-like mass in lower abdomen on side of hernia.
 6. Perceptible asymmetry of lower abdomen, the hernial side being higher.
 7. Dullness on percussion in flanks due to fluid and perceptible fluid wave.
 8. Blumberg's sign of peritoneal irritation.
 9. Greater abdominal than scrotal tenderness.
- After opening the sac:
1. The presence of two or three distinctly separate loops of gut.
 2. Escape of fluid, clear or bloody, from the abdominal cavity.

Peus: A New Case of Hernia Subtransversalis

(Ein neuer Fall von Hernia labialis posterius; hernia subtransversalis). *Gynäk. Rundschau*, 1913, vii, 281.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports a case of hernia subtransversalis, operated on by von Franqué, thus adding one case to the ten hitherto published. Like von Winkel he differentiates hernia subpubica, hernia ischiadica and hernia subtransversalis or labialis posterior. In the third, the hernial opening is between the rectum, coccygeus, tuber ischii and m. transversus perinei. These perineal hernias are caused partly by the passing of the intestinal loops through congenital gaps in the pelvic floor. The gaps may be enlarged by lacerations during parturition and especially by forceps delivery. By the great strain upon the abdominal musculature intestinal loops or omentum may then be forced through. These hernias have the opening in the m. levator ani, and the sac is formed by skin, fat tissue, superficial and pelvis fascia, subserosa and peritoneum. Zuckerkandl and Ebner are of the opinion that perineal hernias occur only with congenital invagination of the peritoneum into the pouch of Douglas. The author considers this a predisposition but not a *conditio sine qua non*. Two congenital perineal hernias are described in the literature.

Von Franqué laid the hernial opening free, extirpated the sac, closed the opening with frontal sutures and pulled the levator ani over it to the os pubis without grasping the periosteum. The opening was on the outer border of the pubic part of the levator ani at about the height of the middle of the perineum and close beneath the transversa perinei. The patient has had no relapse for two years and a half. The findings before and after the operation are illustrated.

These hernias may be treated with trusses if there are no incarcerations and if the hernias can be replaced; otherwise operation is necessary. KNOOP.

Santucci, A.: A Rational Deep Suture for Bassini's Operation (La suture rationnelle du plan profond, dans le procédé de Bassini). *Clin. chir.*, 1913, xxi, 779. By *Journal de Chirurgie*.

The author states very truly that grave consequences may result from tying the sutures that unite the crural arch with the internal oblique and transversalis muscles. Such tying may cause gangrene of the parts tied, as the result of the mechanical action, and of the neighboring parts, as the result of the interruption in the circulation. The blood vessels that nourish the muscles run parallel to their fibers. Although it is true that the deeper the sutures are placed in the muscles the better from the standpoint of strength, there is, nevertheless, great danger of an extensive necrosis.

On this first point there can be no question—the sutures must be placed in tissue that is firm, and they must draw together without strangulating. To meet these requirements the author proposes substituting for the ordinary interrupted sutures a series of sutures in the shape of a U, the base of which should include the crural arch, and the arms of which should pass through the deep muscle and the aponeurosis of the external oblique muscle and be tied superficially to the latter. His plan is not bad *à priori*. It is to be feared only that by his method the suppression of the deep muscles would be accomplished less easily than by the usual technique. As a new argument in favor of his method the author adds that, in case of infection, the sutures, though deep in their action, are easy to get at.

PIERRE FREDET.

Gundermann, W.: The Significance of the Omentum in Physiological and Pathological Conditions (Über die Bedeutung des Netzes in physiologischer und pathologischer Beziehung). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 587.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The omentum of the mammal is a peculiar, highly lymphatic, membranous organ developed from the excessive growth of the mesogastrium. Its function is not definitely known. Its importance as a reservoir of fat is doubtful. It is not an anchor for the transverse colon. It is, however, a regulator for the gastric vessels during physiological hyperæmia of the stomach. The author believes that under pathological conditions ligation of the omentum is the direct cause of post-operative hæmorrhage of the stomach and bowel, especially in elderly people the valves of whose omental veins are defective. It seems that the degenerated liver tissue following slight thrombosis of the portal veins is toxic to the gastric vessels which are overfilled after operation. Another function of the omentum is to serve as a place where collateral circulation is established in cirrhosis of the liver and uterine tumors. It has no movement of its own. The absence of the omentum decreases the resistance against peritoneal infection. Intra-peritoneal free omentum transplantation is possible only when asepsis is perfect and when there

are no adhesions. Foreign substances (carmin, cærulein) introduced into the abdominal cavity are partly absorbed through the diaphragm and its lymphatics within fifteen minutes. The remainder is fixed by the omentum and transported by phagocytosis through the omental lymph stream within twenty-four hours.

JOSEPH.

Schmieden, V.: Circumscribed Inflammatory Tumor Formation in the Pelvis, Originating from the Greater Omentum (Über circumscribte entzündliche Tumorbildung in der Bauchhöhle, ausgehend von Netz). *Berl. klin. Wchnschr.*, 1913, l, 908.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

Schmieden compares cases described by Küttner of idiopathic tumor-forming fat necrosis of the omentum with a case in which the development of a tumor the size of a man's head extended over many months. The tumor could not be extirpated, and its growth was not influenced by exposure and incision. Finally a high grade intestinal obstruction resulted, so that an extensive operation was necessary (exclusion of the cæcum and ascending colon surrounded by the tumor growth, and lateral anastomosis of the lowest loops of resected small intestine that enter the tumor with the transverse colon). Only when the irritation, produced obviously by the passage of faecal material, had been excluded did a retrogression of the tumor take place. At the last examination (eight months after the operation) the tumor could not be palpated.

Schmieden is unable to explain the causes in the formation of the morbid entity in this case. He believes that it must be attributed to thrombotic processes with nutritional disturbances in the omental fat, emboli, hæmorrhages, or circulatory disturbances produced by torsions of small pieces of omentum with incomplete constriction. Adipose people are predisposed. In the differential diagnosis, beside real tumors, actinomycosis must be taken into consideration.

REINHARDT.

Frazier: Mesenteric Cysts, with Report of a Case of Sanguineous Cysts of the Mesentery of the Small Intestine. *J. Am. M. Ass.*, 1913, lxi, 97.

By *Surg., Gynec. & Obst.*

A review of the literature on the subject of mesenteric cysts is attempted, together with a complete report of a case observed by the author.

The origin of cysts of the mesentery is in many cases obscure. Many classifications have been offered by investigators but that which the author prefers is the one adopted by Moynihan. He classifies them according to their nature as: (1) serous cysts, arising either from a lymphatic dilatation or from hæmorrhages between the layers of the mesentery; (2) chylous cysts, probably the most numerous, containing a milky white fluid and due to a dilatation of some of the lacteals or chyloferous vessels; (3) hydatid cysts, due to the tænia echinococcus; (4) dermoid cysts; and (5) sanguineous cysts, the class to which the case reported belongs.

The cysts vary in size from that of a pea to the size of a man's head. They are usually oval in shape, their greater diameter being vertical. They are either uni- or multi-locular. The wall is composed of fibrous tissue and varies in thickness from a thin membrane to 1 cm. The character of the contents depends upon the origin of the cysts and also upon whether hæmorrhages have taken place into the cyst or not.

The symptoms depend largely upon the size of the cyst and upon its relation to the neighboring viscera. Many of the smaller cysts are discovered only at autopsy and caused no inconvenience during life. The symptoms which mesenteric cysts most commonly produce are pain, more or less severe, digestive disturbances, and symptoms of acute or chronic intestinal obstruction. Coincidentally there may be loss of weight and inanition and emaciation, and if operative measures are postponed too long peritonitis may develop from rupture of the cyst or the patient may die of inanition.

Percussion and palpation reveal the usual signs of abdominal tumor and fluctuation may sometimes be elicited.

The treatment, in all cases, should consist in operative measures. Theoretically there are four possible modes of procedure: (1) aspiration; (2) enucleation; (3) resection of the involved intestinal segment followed by excision; and (4) incision and drainage. The first procedure has become obsolete. Wherever possible the radical procedure should be attempted, but when there are acute symptoms of intestinal obstruction it may sometimes be necessary to merely incise and drain, as many of these patients with acute obstruction will not tolerate any but the simplest and most rapid operation.

The case reported is that of a man who fell eleven years previous to the operation and received a severe blow upon the abdomen. Subsequently he noticed a small tumor above the symphysis, which very gradually became larger. During the past year this growth had become more rapid. The operation showed a large mesenteric cyst near the ileo-cæcal valve and subsequent examination showed it to be of the sanguineous variety. The cyst was removed and a large piece of bowel resected with it. An uneventful recovery ensued. J. H. SKILES.

Cartolori, F.: Mesenteric and Retroperitoneal Blood Cysts (Sur les kystes hématiques mésentériques et rétroperitonéaux). *Clin. chir.*, 1913, xxi, 725. By Journal de Chirurgie.

This article, which is a critical study of the subject, includes an account of an unpublished case treated by Spangaro. A man 65 years old had a smooth, elastic and fluctuating subumbilical tumorous mass in the abdomen about the size of a seven months' pregnancy. The mass was slightly mobile but was not influenced by respiration. On operating, Spangaro found a cyst surrounded by the intestines and covered by peritoneum, on the surface of which were numerous large blood vessels. He tried to

enucleate it but it adhered so closely to the ureters that some of the posterior wall had to be left in. Its contents were a serosanguinous fluid and red blood clots. A few days later a fistulous opening appeared at the lower angle of the wound from which escaped a seropurulent fluid. The subject gradually lost weight and died four months after the operation.

The autopsy showed that the fistula led to a cavity in front of the colon. In this cavity were found remnants of the cyst that had not been removed.

Histological examination showed that the wall of the cyst was made up of old connective tissue, lymphoid tissue, and new, very vascular connective tissue. Its thickness varied from 2 to 8 mm.

The author believes that this was an old lymphatic cyst which had become bloody as the result of a chronic inflammatory condition of its wall.

PIERRE FREDET.

GASTRO-INTESTINAL TRACT

Carnot, P.: Movements of the Stomach and Duodenum Studied by the Perfusion Method (Les mouvements de l'estomac et du duodénum étudiés par la méthode de la perfusion). *Compt. rend. Soc. de Biol.*, 1913, lxxiv, 1265.

By Journal de Chirurgie.

By means of the perfusion method described by Carnot and Glénard, Carnot has been able to study the movements of the stomach and duodenum of the cat. According to this method, the detached mass of viscera, distended by a semiliquid substance, is immersed in Cloeke's oxygenated fluid or in defibrinated blood. Carnot studied the movements from the point at which they started to the point at which they passed the pylorus and went over into the duodenum.

On the fundus side the stomach contracts to form a veritable balloon confined below by the medio-gastric groove. The part of the stomach that is intermediate between the fundus and the prepyloric antrum is equally contracted. During activity the stomach takes on an hour-glass form which is modified by the peristaltic waves passing from the cardia to the pylorus. It is an exaggeration of this physiological phenomenon which gives rise to intermittent tension of the epigastrium when the pylorus is obstructed. The prepyloric antrum is bounded on the side near the stomach by a groove of contraction similar to the mediogastric ridge, and peristaltic waves tend to expel its contents through the pylorus. In the duodenal bulb there are antiperistaltic movements tending to exert on the pyloric ring pressure equal to that of the pyloric antrum. The pylorus itself does not participate in these contractions directly. When it opens the duodenal bulb contracts and is then moved by peristaltic contractions which force the bolus of food down into the small intestine.

The perfusion method makes it possible to determine exactly by cinematography the movements of

the gastroduodenal apparatus, an apparatus that, on the basis of its partial contractions, has three distinct parts; i. e., the fundus, the prepyloric antrum, and the duodenal bulb. This method confirms also the results obtained by radioscopy after the ingestion of bismuth. **PIERRE CRUET.**

White, F. W., and George, A. W.: The X-Ray Method in Diagnosis of Gastric and Duodenal Ulcer. *Boston M. & S. J.*, 1913, clxix, 157.
By Surg., Gynec. & Obst.

According to the personal experience of the authors, X-ray methods add materially to the conciseness of diagnosis in gastric and duodenal ulcer. Serial radiographs are used as a basis for conclusions, the screen observations serving to give a general survey of conditions and to show the facts about mobility and motility.

Radiological signs that may accompany ordinary gastric ulcer are: local spasm, seen most often when the stomach is nearly empty; a reflex pyloric spasm of variable duration; vagotonia; and, in half of the cases, residue after six hours, due to spasm of the pylorus, irregular peristalsis or organic obstruction. In hour-glass contractions following ulcer the segmentation is clean cut and constant, and the stomach is drawn to the left by contraction along the lesser curvature; in adhesions to the liver and gall-bladder the stomach is drawn to the right and fixed there. Penetrating ulcers give a characteristic protrusion of the bismuth, with or without a gas bubble at the top.

In duodenal ulcer the shadow of the first portion of the duodenum undergoes change in form and outline, and gastric motility is affected. Constant filling defects in the caput duodeni are recognized from a series of plates made to show this structure to the best advantage in each individual case. Frequent use is made of the lateral ray projection, with the patient lying on the right side. Worm-eaten edges in the bismuth-duodenal shadow are common in duodenal ulcer but may be present also in adhesions and malignancy. The gastric motility in duodenal ulcer is variable and the actual time of emptying depends upon a number of factors the result of which in a given case may be anywhere from a marked hypermotility to a grave degree of stasis.

It is predicted that this line of work will become much more valuable in the future as the significance of the various X-ray findings becomes more firmly established. In the authors' hands the method at present is considered very helpful if not indispensable.

HOLLIS E. POTTER.

Mills, R. W. and Carman, R. D.: The X-Ray in the Diagnosis of Gastric Ulcer and Its Sequelæ. *Surg., Gynec. & Obst.*, 1913, xvii, 1.

By Surg., Gynec. & Obst.

According to the authors there is need of co-operation on the part of the internist and the röntgenologist in the utilization of the X-ray for purposes of gastro-intestinal diagnosis. A discus-

sion is then given of gastric anatomy and physiology as revealed by the X-ray. The changes in the stomach as indicated by the X-ray that may indicate the presence of gastric ulcer are then discussed under four headings; i.e., (1) changes in tonus; (2) changes in position and form; (3) changes in peristalsis and motility; and (4) the relation that areas of pain, tenderness, and mass bear to X-ray findings.

Changes in tonus give different X-ray findings according to the part of the stomach that is involved. Of changes in tonus resulting from ulcer of the pars pylorica nothing is known as yet. Direct abnormalities of tonus in the pars cardiaca and pars media are due to the ulcer. Spasm of the circular muscle fibers of the stomach at the level of the ulcer result in the formation of incisuræ on the greater curvature. The authors discuss the specificity of such incisuræ, their size and form, and the degree to which the stomach is divided by them. They give also criteria as to the genuineness of the X-ray picture of incisuræ, and a discussion of pseudo-incisuræ and the diagnostic value of the real incisuræ.

Changes in the position and form of the stomach may result from ulcer. When they occur as the result of causes within the stomach, the stomach as a whole is in a left median position. This position may be due to an acquired atony. The dislocation of the pylorus to the left may be the result of contractures. Indications of change in form of the stomach due to gastric ulcer are the visualization of the ulcer crater as a projection on the periphery of the gastric shadow, the "nischen sign," and the formation of the hour-glass stomach. All of these are described and similar phenomena not indicating ulcer are discussed. When changes in position and form result from uncompensated obstruction of the pylorus by ulcer, the stomach occupies a central position as a whole and is laterally enlarged, especially to the right of the median; the gastric residue is also in a central position. If the ulcer obstruction is compensated, the findings are not characteristic. In such cases the stomach is enlarged but normal in position and form.

Changes in peristalsis and motility may denote the presence of gastric ulcer. In the case of non-obstructive ulcer there are no characteristic changes in peristalsis though the peristalsis may be increased. Antiperistalsis is discussed in its relation to non-obstructing ulcer of the pars pylorica. Delayed motility is suggestive of ulcer. In cases of uncompensated ulcer of the pylorus, hyperperistalsis may at some time be the rule and there may be marked delay in the motility.

Under the heading relation of areas of pain, tenderness, and mass to X-ray findings are discussed the necessity for care in making deductions, the possibilities as to the relation of pressure-sensitive loci to the stomach shadow, the causes of ulcer pain and tenderness, hypertension, and reflex irritation of the parietal peritoneum. Hypertension plus hypersensibility, according to the authors, is the cause of unlocalized ulcer pain. As a diagnostic aid it is

useless because unlocalized. Pressure tenderness is also discussed. Gastric ulcer is not intrinsically painful. Pressure tenderness due to a reflex does not as a rule correspond to the ulcer site. Irritation of the parietal peritoneum as a result of ulcer perigastritis gives, as a rule, definite information as to the location of the ulcer and adds to the X-ray findings if it corresponds to the site indicated by the X-ray. A palpable mass of ulcer origin probably corresponds to the ulcer site because of associated perigastritis and parietal peritoneum irritation.

The article is illustrated with numerous radiographs and is followed by a list of references to the literature of the subject.

Röpke, W.: Chronic Gastric Ulcer in the X-Ray Picture of the Air-Inflated Stomach (Das chronische Magengeschwür im Röntgenbilde des luftgeblähten Magens). *Mitt. u. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 307.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Röpke is enthusiastic in regard to the X-ray examination of the air-inflated stomach. While the inflation with carbon-dioxide gas is dangerous because it extends the stomach suddenly and without any regard to its size, the careful introduction of a sound and inflation with air is quite harmless and is always permissible provided that at least a month has elapsed since the last free hæmorrhage.

With the aid of excellent X-ray pictures the author first describes the appearance on the plate of the normal stomach when inflated with air. When completely inflated its outline is a curved smooth line; when incompletely inflated, its outline shows indentations and the folds in the stomach wall are plainly visible. A stomach with a simple non-perforating ulcer when inflated has a very characteristic appearance in the picture, and by the air-inflation method in most cases the details are more clearly brought out and the whole picture better defined than by the bismuth method. A sharp constriction in the stomach picture, together with knotted or oblique band-like shadows, or a solid shadow on the lesser curvature either connected with the band-like shadows or at the end of the knotty shadows may be regarded as practical proof of the presence of a gastric ulcer, particularly if at the same time the clinical history has indicated such a condition. If the ulcer has penetrated into the surrounding tissue and organs, the X-ray picture is different and also in this case is so characteristic that a diagnosis can be made from it with certainty. In such pictures the author noted more or less clear areas within the outline of a large, solid shadow which encroached upon the lesser curvature. On operating, these clear areas were found to be the defects in the stomach wall where there had been a penetration through the indurated ulcer area into the left lobe of the liver and into the pancreas.

In most cases the air-inflation method requires only one picture to bring out the details of size, form, and position of the stomach. With the bis-

moth-meal method these points in the majority of cases can be determined only after a number of pictures have been taken with the patient in different positions. The air-inflation method, however, does not give any information in regard to the functional activity of the stomach, and for this the bismuth method will have to be used. In all of the cases that he reports the author was able by means of the air-inflation method to make a positive diagnosis both of simple indurated ulcers and those that had perforated into the surrounding tissues.

VON TAPPEINER.

Steinharter: A Preliminary Note on the Experimental Production of Gastric Ulcers by the Intravenous Injections of Clumped Colon Bacilli. *Boston M. & S. J.*, 1913, clxix, 81.
By Surg., Gynec. & Obst.

An emulsion of colon bacilli in the presence of free hydrogen ions, the author states, is agglutinated in from one to four hours when incubated at body temperature. Gastric juice of high acidity possesses this agglutinating power. With these facts as a basis, such an emulsion, when injected into the ear vein of a rabbit, has been followed by the formation of a gastric or duodenal ulcer within 24 hours.

The method of preparing the emulsion was this: active strains of colon bacilli in broth emulsion were agglutinated with a weak solution of active acid and hydrochloric acid; 2 cc. or 3 cc. of this emulsion were injected into each of six rabbits, and in each an ulceration of the stomach or duodenum was afterwards found.

Many important questions, such as the method of action of the colon bacilli (whether it is mechanical or toxic), whether or not it has a selective action on the stomach, or whether other organisms will behave in the same way, remain to be treated in a later communication promised by the author.

R. W. FRENCH.

Deaver: Posterior Gastrojejunostomy in Acute Perforative Ulcer of the Stomach and Duodenum. *J. Am. M. Ass.*, 1913, lxi, 75.
By Surg., Gynec. & Obst.

This paper emphasizes the great importance of early diagnosis of a perforation of the stomach or duodenum and the imperativeness of an immediate operation.

The diagnosis of an acute perforation is made mainly upon three things: first, the pain; second, the rigidity; and third, the history of previous indigestion of ulcer type. The pain is very intense, and very sudden in appearance. There may have been premonitory pains of great severity but the pain of perforation is agonizing and unbearable. It is abdominal, not pelvic, and usually in the mid-abdomen, epigastrium or hypochondrium, although occasionally radiating to the iliac fossa or back.

General rigidity of the abdominal muscles sets in at once after perforation. The rigidity is of the

extreme type, often called board-like. It is most marked in the upper abdomen. With the rigidity there is extreme tenderness, which is first located over the site of the perforation, but with the rapid spread of peritonitis other areas of peritoneum become sensitive to pressure and so the tenderness often becomes confusing. In perforated duodenal or gastric ulcers particularly, the infection is apt to spread along the paracolic grooves into the right iliac fossa. When the patient is first seen a few hours after the perforation the tenderness may be as marked over the region of the appendix as elsewhere and so lead to a diagnosis of perforative appendicitis.

A history of previous stomach or intestinal trouble can usually be obtained, although many times the patient is in such agony that the history must be obtained from friends or relatives. Occasionally, however, no history pointing to the presence of an ulcer can be elicited. A history of prior abdominal trouble is of assistance in making the correct diagnosis, but the absence of such a history does not by any means exclude the diagnosis of perforation.

These are the important symptoms and signs of perforated ulcer, and the other signs and symptoms usually described are either of minor importance as regards diagnosis or they appear only at a time when it is already too late to help the patient. The temperature, pulse, and respiration are sometimes changed slightly early but not to any diagnostic degree. Distention, accumulation of fluid in the abdomen, and the subsidence of peristaltic movements are all signs which are of prognostic, but not of diagnostic, importance. No case should be allowed to wait until these signs appear, as they foretell only too surely the approaching end. Free gas in the abdominal cavity and the obliteration of liver dullness also show that the case has almost certainly passed beyond the help of the surgeon. Leucocytosis is usually present early but may be slight.

In treatment of a perforation of a gastric or duodenal ulcer the important thing is to operate and to operate early. The majority of cases operated upon during the first twelve or eighteen hours recover while the cases that have gone over twenty-four hours usually succumb. The line of treatment adopted by the author was as follows: (1) closure of the ulcer; (2) plication of the duodenum to obliterate its lumen and fortification of this area by covering with the gastrohepatic and gastrocolic omentum; (3) posterior no-loop gastrojejunostomy; (4) tube drainage of the pelvis through a suprapubic stab.

The after-treatment consists in the sitting posture, continuous proctoclysis, and the prohibition of everything by mouth until peristalsis has been re-established as evidenced by auscultation and by the passage of flatus. The stomach tube is used freely for vomiting, regurgitation, or gastric distention. The administration of food is attempted very cautiously, beginning with albumin water. No purgatives are used but a cleansing enema is given the third day after operation.

J. H. SKILES.

Truesdale: Cancer of the Stomach. *Boston M. & S. J.*, 1913, clxix, 44. By Surg., Gynec. & Obst.

The author divides surgery of the stomach for cancer into three divisions:

1. The exploratory operation done to establish the diagnosis or to determine the operability of a palpable tumor. That this procedure is too infrequently used is obvious from the number of inoperable cases that come to surgeons. There is too often more reluctance on the part of the surgeon to do this operation and more on the part of the patient and his physician to have it done for suspected cancer, than to prove a palpable cancer inoperable.

The first stage of pyloric obstruction is due, not to the cancer *per se*, but to the tumor plus the pericancerous inflammation. Under these circumstances, conservative treatment yields results immediately good but ultimately disastrous. The microscope, chemistry, and the X-ray are all valuable in diagnosis, but the personal history, more than any other factor, must be depended upon mainly to furnish evidence for or against exploratory laparotomy.

2. The palliative procedures occupy but a small place in surgery of the stomach for cancer. The author believes that the excision of a large tumor-mass plus a gastro-enterostomy is preferable to a gastro-enterostomy alone as a palliative procedure.

3. The radical operation, which consists of partial gastrectomy and gastro-enterostomy. Wide margins of healthy tissue should be included, together with a complete excision of the lymphatic zones draining the infected area.

R. W. FRENCH.

Thomson and Graham: Fibromatosis of the Stomach and Its Relationship to Ulcer. *Edinb. M. J.*, 1913, xi, 7. By Surg., Gynec. & Obst.

Fibromatosis may be localized or diffuse, but it is the localized form which, from a clinical point of view, is the more important to differentiate from cancer. This form nearly always commences in the vicinity of the pylorus and spreads from there towards the cardia, usually, but not always, showing a preference for the lesser curvature. The external appearance of the stomach shows marked changes; the normal area is flaccid and collapses readily, whereas the affected portion is rigid and densely hard like gristle. The peritoneal surface, if free from adhesions, is white, pearly, and smooth. The diseased mucosa is usually firm and unyielding, closely adherent to the submucosa. It presents a hillocky surface which stops abruptly at the pyloric ring but gradually merges into the normal towards the cardia. The submucosa is converted into a thick, solid, tough, white tissue, not so dense as a cheloid, but resembling the consistence of a hard fibroma. The layer is made up of uniform fibrillated connective tissue with here and there collections of lymphocytes in the vicinity of the muscularis mucosæ. The muscularis shows a marked hypertrophy of the circular fibers with characteristic segmentation, being divided into bundles by septa of white fibrous tissue continuous with the fibrous tissue of

the submucosa. The serous and subserous coats are little altered as a rule.

The most striking fact in the pathogenesis of fibromatosis is the apparently invariable association with ulcer or ulceration of the mucosa. As regards the relation of fibromatosis to cancer they suggest that an ulcer is the primary lesion, which is followed by fibromatosis, and that, finally, a cancer originates at the edge of the ulcer. Clinically the features are those of ulcer. Hæmorrhage was a prominent feature in only one case.

Operative treatment: Where a diagnosis can be made and cancer excluded, the authors advise resection of the affected part. A reasonable alternative in weak patients is gastro-enterostomy and at the same time removing several glands from the lesser curvature. If these show the presence of cancer, the resection should be carried out after a suitable interval for recuperation. If the disease does not lend itself to radical treatment, then relief of symptoms may be had by gastro-enterostomy, or if impracticable, by jejunostomy.

R. W. McNEALY.

Janeway: The Relation of Gastrostomy to Inoperable Carcinoma of the Œsophagus, with a Description of a New Method of Performing Gastrostomy. *J. Am. M. Ass.*, 1913, lxi, 93.

By Surg., Gynec. & Obst.

A plea is made by the author for the earlier performance of gastrostomy on cases of inoperable carcinoma of the œsophagus before the patient has become emaciated from inanition. An early operation not only gives the patient a longer period to live but also relieves the cancer from the constant stretching and irritation caused by swallowing. The main objections usually raised to the performance of gastrostomy are the following: (1) the opening may leak; (2) the new fistula which leads to the stomach is permanently lined with granulation tissue and hence may cause some discharge; (3) there may be some irritation in the region of the skin; and (4) the annoyance of wearing a tube constantly.

The most serious of these objections is the possibility of leakage. This can well be prevented by following the procedure invented by Senn, which consists in invaginating a small cone of the stomach wall around a tube and then suturing the base of the cone to the parietal peritoneum. This forms a valve which prevents the outflow from the stomach.

The establishment of a permanent fistula requires an epithelial lining for the fistulous tract. This is accomplished by a procedure described by the author. An incision is made parallel with the rectus fibres a short distance to the left of the median line and 3 or 4 cm. below the costal margin. The fibres of the rectus are not divided but are separated bluntly, the posterior sheath of the rectus cut through, and the peritoneal cavity opened. The anterior wall of the stomach is then pulled through the wound and an incision 3 to 4 cm. long made with a perpendicular incision 1 cm. long at either end of the first incision. This forms a flap of stomach wall 3 cm. by 1 cm., and

by sewing the opposite edges of the opening together transversely to the direction in which the incision 3 cm. long was made, a hollow prolongation of stomach wall is formed, which is about 5 cm. long. This tubular projection may then be fastened into the abdominal incision and the outer end sutured to the opening in the skin. The rectus muscle acts like a sphincter and no leakage occurs under ordinary circumstances.

J. H. SKILES.

George: The Positive Diagnosis of Duodenal Ulcer by Means of the Röntgen Ray. *Am. Quart. Röntgenol.*, 1913, iv, 187.

By Surg., Gynec. & Obst.

To obtain the most valuable evidence of the presence of duodenal ulcer, the actual deformity, slight though it may be, must be demonstrated as constant on a series of radiographic plates. To date, the frequent failures here and abroad result from too great a dependence upon such data as can be observed with a fluoroscope.

The author assumes that the observation of Germain, that the first portion of the duodenum has a very constant shape and structure unless it is diseased, is correct. Also that a duodenal ulcer, which is producing symptoms, involves the mucularis early, becomes somewhat callous, and produces a real defect in the duodenal outlines.

The "caput duodeni" is sometimes better filled in the standing position, sometimes in the prone position. Not infrequently, to make it quite visible, plates must be made with the light directed laterally through the body from the left side, the patient lying or standing. This is most often true in the steer-horn type of stomach or in special conditions in which the duodenum projects backward and is hidden behind the stomach. This method has added a great deal to the accuracy of duodenal inferences as well as to the radiographical knowledge of the posterior wall of the stomach.

In conclusion the author is satisfied in having made minor incorrect inferences in only three of fifty-nine operated cases of duodenal ulcer, and major incorrect inferences in none. This showing he believes makes his results practically positive.

HOLLIS E. POTTER.

Bunting and Jones: Intestinal Obstruction in the Rabbit. *J. Exp. Med.*, 1913, xviii, 25.

By Surg., Gynec. & Obst.

In a former paper the authors stated their belief that the early death in high intestinal obstruction is due to the absorption of a toxic duodenal secretion. If closed loops be made of lengths of ileum and jejunum in a fasting animal, no secretion occurs into these loops, while the duodenal loop becomes distended with a faintly straw-colored alkaline fluid.

The only difference between the upper and lower segment of the small intestine of the rabbit is the presence of Brunner's glands. It seems justifiable to conclude that the secretion found in the duodenal loop comes from these glands.

J. F. CHURCHILL.

De Quervain: Errors of Diagnosis in Appendicitis
(Des erreurs de diagnostic dans l'appendicite). *Rev. méd. Suisse romande*, 1913, xxxiii, 513.
By *Journal de Chirurgie*.

One of the greatest criticisms made of the radical operation for appendicitis is that there may have been an error in diagnosis. However, the radical operation is the only method of lessening the mortality of the disease, and out of 1723 cases operated on for appendicitis there were but ninety-four in which there was no lesion in the appendix.

Ten times the error was on account of perforation of gastric or duodenal ulcers which should be readily recognized from the symptoms of perforation, extreme initial pain, and general muscular rigidity.

Twice the error was due to intestinal perforation in the ileocecal region, twice to intussusception, once to acute pancreatitis, and once to acute occlusion of the mesenteric vessels. It must be differentiated from cæcum mobile, typhlatony, typhlectasy, Lane's kink. Five errors were due to a pneumococcus peritonitis in children from four to ten. Liver abscess, subphrenic, non-appendicular abscesses, and intestinal worms, have also caused errors. In three cases, cholecystitis, and in one, renal lithiasis were mistaken for appendicitis. There were nine cases in which appendicitis was confused with acute salpingitis; nine cases, with tubal abortions and rupture of tubal pregnancies; one, with torsion of the ovary; and fourteen, with torsion or rupture of ovarian cysts.

In half of these cases the operation was as urgent as if it had been appendicitis. In a fifth, the intervention, if not urgent, was justifiable, and the best thing to do. In the rest the operation was unnecessary, but rarely caused death. These facts are such that they urge the surgeon to operate without fear for appendicitis.

PAUL MATHIEU.

Pólya, J.: Cases of Appendicitis, Cholelithiasis, and Pericholecystitis, Showing the Clinical Picture of Ulcer of the Stomach or Duodenum
(Fälle von Appendicitis, Cholelithiasis und Pericholecystitis, welche das Symptomencomplex von Ulcus ventriculi und duodeni darboten). *Budapest kir. Orvose. Értésítője*, 1913, ii, 377.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The author reports seven cases in which the history of typical pains, hæmoptysis, the clinical symptoms, and the X-ray picture indicated stomach or duodenal ulcer, but on operation there was found either chronic appendicitis, dilatation of the gall-bladder, adhesive pericholecystitis, or gall-stones. These cases show: 1. That in cases in which pain in the stomach has persisted for a long time in spite of internal treatment, operation should be undertaken, for, even if there is no ulcer, some condition will certainly be found which will explain the pain and which can be relieved surgically. 2. That diseases of the appendix and gall-bladder may lead to superficial ulceration from which hæmoptysis may arise even though it may not be pronounced enough to be demonstrable on operation. 3. That it is

possible that some of the pain observed after an operation for ulcer is caused by disease of the appendix, gall-bladder, or other abdominal organs.

PÓLYA.

Ducoux: Hydro-Appendicitosis (De l'hydro-appendicite). *Rev. de gynéc. et de chir. abdom.*, 1913, xx, 143.
By *Journal de Chirurgie*.

"Hydro-appendicitosis" is the name given by Jaboulay to the condition of the appendix which becomes suddenly and intermittently distended by the secretions of its mucosa. The symptoms are those of appendicitis.

Ducoux has collected eleven cases of this kind, two from Paris (reported by Petit and Walther) and nine from Lyons. Three of these were Jaboulay's.

In hydro-appendicitosis the appendix is turgid, swollen, and red, and from 8 to 12 cm. in length. It has been compared in appearance to a penis, a small intestine, and a banana, and when irregular, to a mandarin or a hydrocele. In some cases there may be one or two swellings resembling cysts. There are frequently adhesions fixing the appendix to the cæcum or bending it toward the omentum, and the meso-appendix is frequently œdematous. The walls are very thin and care must be taken when separating adhesions to avoid rupturing them. The liquid from the appendix in one of Jaboulay's cases caused tuberculosis in a guinea pig. In one of Petit's cases drops of the liquid which fell into the wound produced an ulceration, apparently tuberculous, which was hard to cure. By microscopic examination Jaboulay found in one case giant cells in sections of the appendix. In several cases miliary tubercles were found in the cæcum and intestine. Accordingly it seems logical to classify "hydro-appendicitosis" as an atrophic tuberculosis of the appendix accompanied by dropsy.

Clinically there are three forms of hydro-appendicitosis; i. e., a latent form, with digestive trouble; a form in which there is tumor, and a form characterized by repeated attacks of appendicitis. The last is the most common. The form characterized by tumor must be differentiated from cancer and ileocecal tuberculosis.

The treatment advised is resection of the appendix. Special care should be taken to keep the fluid contents from coming into contact with the wound. The incision must be large. Jaboulay recommends a transverse incision beginning at the lower third of the incision of Jalagnier and extending toward the crural arch. The prognosis is grave, not so much on account of the lesions of the appendix as on account of tubercular lesions in the lungs that frequently accompany this disease. GEORGES LABEY.

Solieri, S.: Gastric Hyperacidity of Appendicular Origin (Sur la gastropathie hyperacide d'origine appendiculaire). *Rev. osp.*, 1913, iii, No. 10.
By *Journal de Chirurgie*.

Moynihan in 1910 was among the first to describe an appendicular dyspepsia. This disease occurs

most frequently between the seventh and fifteenth years. It has an insidious onset, rarely following an acute attack, and its symptoms are usually like those of gastric ulcer. There is gastric pain soon after meals, which is not radiating, and which is frequently accompanied by acid vomiting and marked hyperchlorhydria. Tenderness to pressure is felt in the epigastric region but none elsewhere except when epigastric pain is caused by pressure at McBurney's point. On operating on a case of this kind, Moynihan found the exterior of the stomach normal in appearance. He noted, however, intermittent spasmodic pyloric contractions. Solieri in a similar case first performed a gastro-enterostomy with no beneficial result. Appendectomy performed later, however, resulted in a complete cure. The appendectomy followed a typical attack of appendicitis with abscess formation and faecal concretions four months after the gastro-enterostomy was performed. Two months later the patient had gained 12 kilos and had not had any further gastric distress.

AMEUILLE.

Cargile: Grape Seeds in a Pelvic Abscess. *South. M. J.*, 1913, vi, 330. By Surg., Gynec. & Obst.

The author reports the case of an 11 year old boy who, after having occasional attacks of what was called indigestion over a period of several years, developed a pelvic abscess. This was drained and 23 grape seeds escaped in the pus. One seed was seen in the faeces. An investigation in the library of the Surgeon-General's office fails to reveal a similar case. The nearest to it is one in which 122 small shot escaped through the appendix. Another interesting feature of this case was the absence of pain. The author states that he had confined the mother twice and that, while she could feel the contractions, both labors were absolutely painless. In no other respect was the mother abnormal.

C. H. DAVIS.

Cheever, D.: Etiology and Significance of Pericolic Membranes. *J. Am. M. Ass.*, 1913, lxi, 248. By Surg., Gynec. & Obst.

The etiology of pericolic membranes has not been settled beyond dispute. The author, however, considers the origin of these membranes to be of a dual nature. On the one hand he places the membranes resulting from congenital malformations, and on the other hand, those which are due to peritoneal irritation. In support of his theory that many of these membranes have a congenital origin he calls attention to the fact that the very nature of the thin diaphanous veil which constitutes the membrane in many of the cases would suggest that it is a membrane of developmental rather than of inflammatory nature; also the study of these membranes in the foetus and in the new-born has added overwhelming evidence in favor of the developmental theory in many of these cases. Membranes appearing in the foetus or the new-born could hardly come from peritoneal irritation or inflammation unless we

accept the unproved theory of foetal peritonitis. As to exactly what step of the development of the foetus is responsible for the formation of these membranes the author is not able to state. He is inclined to believe that they are formed during the descent and rotation of the caecum from beneath the liver.

Of what pathological significance are pericolic membranes? Future investigation will probably tell us just how much intestinal disturbance can be attributed to these abnormalities. At present there is a marked difference of opinion among surgeons as to what train of symptoms they may produce. The present accepted treatment of the condition seems to be the division of the membranes by the thermocautery.

J. H. SKILES.

White, S.: Cancer of the Colon. *Brit. M. J.*, 1913, ii, 57. By Surg., Gynec. & Obst.

Cancer of the colon is usually a primary disease. Occasionally, however, the bowel becomes involved by extension of the disease from an adjacent viscus such as the stomach. Cancer of the colon is most common between the ages of 40 and 65. Two varieties of the disease require a special description. One, the sclerosing type, is so frequent that it may be regarded as the typical form. Growing very slowly, it leads to an annular constriction of the bowel which, if the patient lives long enough, will end in obstruction. The mesenteric glands are affected late. The second variety, which occurs in a minority of cases, is of the fungating type. There is extensive infiltration of the walls of the bowel and, in addition, a fungating mass sprouts into the lumen of the bowel. There is no constriction of the bowel. It occurs more often in young people and is characterized by rapid growth, early dissemination, bloody stools and cachexia. There is no definite symptomatology and in the annular sclerotic type obstruction may be the first symptom. In obstruction from cancer of the colon distention precedes vomiting. Marked peristaltic movements of the colon are common. The author reviews 26 private cases of colectomies for cancer. Fifteen of these came to him with acute or subacute obstruction and all were relieved by colostomy, the growth being removed from 10 to 21 days later. Four patients died, two from pulmonary embolism, one from defective union of the bowels, and one from metastasis. Thirteen patients remain in apparent good health, eight of them after from 14 to 4 years. Five were operated on within the last 3 years. Colectomy should never be performed where intestinal obstruction is present. Patients beyond 70 years of age are poor risks. White advises colostomy or short circuiting for cases unsuitable for colectomy.

Under operative technique the author advises, first, a thorough exploration of the abdominal cavity for evidence of metastasis before the operation is undertaken. Second, if the disease is too advanced, a short-circuiting, or, if this is not possible, a colostomy. He takes up the method of uniting the bowel but says there is no one way for all cases. There are

few operations in which good technique counts for so much, and every step in the procedure should be carried out deliberately and with infinite care. Three cases are reported as typical of the disease.

M. S. HENDERSON.

Aubertin, C. and Beaujard, E.: The Action of X-Rays on Polyadenomas of the Intestine (Actions des rayons X sur les polyadénomes de l'intestin). *Bull. et mem. Soc. méd. d. hôp. de Par.*, 1913, No. 22, 1221.
By Journal de Chirurgie.

Aubertin and Beaujard had an opportunity to compare two biopsies made eighteen months apart in the case of a man 34 years old suffering with polyadenomatosis of the large intestine. The first specimen was obtained after a few treatments by radiotherapy, the second after 25 treatments, when the symptoms were diminished and rectoscopy showed diminution in the size and number of the polyps. The authors made an histological study of the two specimens and believed that they could attribute to the action of the X-rays a decrease in the size of the glandular crypts, the disappearance of the cyst-like formations, suppression of the cells filled with mucus, and a restriction in the amount of stroma. These changes they interpreted as an histological amelioration of the condition.

MAURICE CHEVASSU.

Kienböck, R.: The X-Ray Diagnosis of Colitis Ulcerosa (Zur Röntgendiagnose der Colitis ulcerosa). *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 231.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

According to Stierlin, colitis ulcerosa shows the following characteristics in the X-ray picture: The diseased portion of the bowel is free from large quantities of bismuth and shows only a few longitudinal bismuth shadow-lines; the border lines of the intestine are parallel, without marks of saccules, and enclose between them a very clear area which has an increased gas content; this picture is constant. Stierlin explains the condition as being a hyperæsthesia of the quickly emptying colon with residue remaining upon the ulcers of the intestinal wall in diverticuli or long-drawn-out lines. Schwartz and Novascinsky report similar findings and give similar explanations. Kienböck reports in detail three cases of colitis ulcerosa, two with tuberculosis and one with dysentery. His conclusions are as follows:

There are two distinct types. The picture of Type I shows a narrow bowel almost without saccules, and with short, wavy shadow-lines which are woven into veils or clouds; the bowel often shows spastic contraction or is of an inflated club shape with a dark margin; in this form the intestinal wall is still mobile. The picture of Type II is that of a broad cylinder of an even thickness, without saccules and with narrowly dentated outlines, a form characterized by rigid infiltration of the walls and the formation of ulcers. The picture of the empty bowel is similar to that of normal digestion. With

the ulcerative process, insufficiency of the Bauhin's valve, adhesions, kinkings, and stenosis are frequent.

HOFFMANN.

Beach, W. M.: A New Operation for Hæmorrhoids. *Pittsburgh M. J.*, 1913, i, 1.
By Surg., Gynec. & Obst.

The author reviews the anatomy of the rectum and anal canal. He protests against the general use of the word "orifice" as applied to the anus and insists that the words "anal canal" should be substituted. The blood supply of the anal canal is derived largely from the superior hæmorrhoidal artery, a continuation of the inferior mesenteric artery. The superior hæmorrhoidal descends from the rectum to the superior part of the anal canal where it terminates in a plexus of veins. These veins are, very thin-walled and are covered only by mucosa. Therefore they are very easily distended by any obstruction to the outflow of the blood.

The author objects to the operations commonly used in the radical treatment of hæmorrhoids. His objections are, that the operation is either too destructive of the mucous membrane and the nerve endings enclosed therein, or it is not radical enough to effect a permanent cure. He criticises especially the Whitehead operation because it removes such a large area of epithelium that contains sensitive nerve endings having a special function to perform in the control of the sphincter ani. He criticises the ligature method because of the sloughing which occurs beyond the constriction and the attending pain. He claims also that at times by the ligature method only the overlying mucosa and not the whole pile is included and as a result the condition tends to recur. He censures the use of the clamp and cautery because of the pain and suffering which he claims follow in many cases and may extend over many weeks.

The operation that Beach recommends is as follows: The patient is anesthetized either generally or locally and placed in the lithotomy position. The tissues of each quadrant are then seized with the forceps and by traction are brought into view. A single-pronged tenaculum is passed through the diseased tissues and the entire mass is removed with curved scissors. Any distended veins that have been left are then removed with a curette. The incised mucosal edges will usually approximate. Ragged edges are trimmed away. To obviate post-operative hæmorrhage, a gauze-covered tube one inch in diameter is inserted through a bivalve speculum. This acts not only as a hæmostatic but also as a splint.

J. H. SKILES.

Smith: A Description of the Enteroptotic Woman. *Surg., Gynec. & Obst.*, 1913, xvii, 71.
By Surg., Gynec. & Obst.

Visceral prolapse in woman is always attended by other closely associated structural abnormalities. On this basis, these women may be divided into two groups. In the one are placed those who in early life were well nourished, more or less sturdy of form

and firm of tissue, who had deep chests, capacious abdomens, and retentive abdominal walls, but who now have considerable relaxation of tissue, muscular weakness, a changed configuration of body, and sometimes loss of weight, the so-called acquired enteroptosis. The visceral prolapse itself is on the whole less in degree than in the second group. The symptoms are oftentimes quite as severe.

The second or congenital group includes those women who from childhood up have been frail of form and lacking in vigorous development. They have little fat, the tissues are soft and relaxed. These are the fundamental characteristics; other changes follow. These women form a distinct type. The chest is small, shallow, and contracted at its lower end. The neck and limbs are as a rule longer than usual. The abdomen is on the whole less prominent than in women of the first group. Muscular insufficiency is common and shows itself in changes in the spinal curve, round shoulders, and flat foot, which commonly express fatigue and are valuable guides in estimating the health of the individual. These are in general much less fixed than the changes in the chest and improve as the woman regains her health. They are responsible for much of the pain. The study of the chest gives a valuable clue to the natural vigor and the early nutrition, for the chest above described can follow only primary defects and long-continued poor nutrition in early life. Intelligent attention to the nutrition of children is necessary if the conditions which follow are to be prevented. The author gives plates of the stomach and bowel and points out the abnormality, mobility, and relaxation.

The two groups described cannot be sharply divided — many are of mixed type — but the purer forms of each are so different as to make a distinction necessary. In the first group fundamental defects are not dealt with; in the second they are, and any treatment undertaken in adult life necessarily has its limitations. Many cases of lesser degree, with a good nervous system, especially when the strain of life is not severe, will have good health. Many may be improved by proper treatment.

LIVER, PANCREAS, AND SPLEEN

Jaugeas: Radioscopic Examination of the Liver.

Arch. Rönt. Ray, 1913, xviii, 48.

By Surg., Gynec. & Obst.

Except for the possible detection of biliary calculi, radioscopy is of more value than radiography in X-ray observation of the liver. The upper surface of the liver lying against the diaphragm can easily be seen; the lower edges are best seen when the hepatic flexure of the colon and the stomach are inflated with gas.

The author has been interested in noticing the mobility of the liver, particularly under different conditions of filling in surrounding hollow viscera. Changes in volume are seen in atrophies and hypertrophies and in certain heart lesions. Of particular

value are the changes in form and position of the upper liver or diaphragm shadow seen in liver abscess, subphrenic abscess, hydatid cyst, and occasionally in syphilis and cancer.

On account of their frequent transparency, biliary calculi are difficult or impossible to demonstrate in most cases. A careful radiographic technique is necessary.

HOLLIS E. POTTER.

Fischer, B.: Primary Chorio-Epithelioma of the Liver (Primäres Chorioepitheliom der Leber). *Frankf. Ztschr. f. Pathol.*, 1913, xii, 462.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports a primary chorio-epithelioma of the liver which macroscopically resembled a primary angio-epithelioma but microscopically showed an entirely different structure. The patient was a woman 35 years of age who, after her second pregnancy, became unable to work and "nervous." She was weak and suffered from nausea, dizziness, and lack of appetite and sleep. A year and a half later she was seized with severe gastric pains, icteric vomiting, cough, and hæmoptysis; subsequently icterus and fever developed. The liver was enlarged, palpable to the left costal arch, and painful. Severe anæmia was indicated by a hæmoglobin content in the blood of 45 per cent, nucleated red cells, polichromatophilia and poecilocytosis.

On section, the liver showed numerous soft, subcapsular, hæmorrhagic nodules the size of a hazel-nut. One of them was nearly as large as the fist. The vena cava and portal vein were not involved, but the hepatic vein and its branches showed numerous hæmorrhagic nodules protruding into the lumen similar to those found in the liver. In the head of the pancreas was a tumor the size of a walnut. The liver showed marked stasis and degeneration of the parenchyma. The tumor nodules consisted principally of clotted blood and thrombus-like stratified layers of blood and fibrin. On careful microscopical examination tumor cells were found (epithelial cells, giant cells, syncytii, great irregularity of cell structure, and giant nuclei). Without doubt, therefore, the case was one of typical chorio-epithelioma of Marchand's type. The pancreatic tumor was metastatic. As all of the other organs, including the uterus, were free from tumors, the chorio-epithelioma must have been primary. There are two possibilities as to its origin: it was due either to a primary teratoma of the liver with subsequent unilateral development of the chorio-epithelium or to an abnormal growth of chorionic villi, transported during pregnancy into the liver.

METTIN.

Chauffard, A.: A Large Amœbic Abscess of the Liver; Rapid Cure by Surgical Treatment Followed by Emetine (Grand abces amibien du foie. Guérison rapide par le traitement chirurgical suivi de la cure d'émétine). *Bull. et mem. Soc. méd. de hôp. de Par.*, 1913, No. 10, 630.

By Journal de Chirurgie.

Chauffard insists that emetine is of great value in treating amœbic abscesses of the liver, as it acts

as a specific to the parasite. He believes that it should be used in all cases of amœbic hepatitis. By treating amœbic dysentery with emetine from as near its beginning as possible, amœbic abscesses of the liver would become much less frequent. Further, the abscess may be stopped in its presuppurative stage as has been observed by Rogers. When pus has formed, Rogers advises emptying the abscess and injecting into it 6 to 10 cgr. of emetine in 30 to 40 cc. of water.

In a case of abscess of the liver, Chauffard opened the abscess by the transpleural incision used by Labey and evacuated some sterile, chocolate-colored pus containing amœbas. The fever fell immediately but at the end of seven days there was still a sanguine purulent discharge. At this time, 4 cgr. of emetine were injected subcutaneously. The next day 8 cgr. in 40 cc. of water were injected into the abscess cavity, and on the two following days, 4 cgr. of emetine were injected subcutaneously, making the total amount of emetine used equal to 20 gr. After the second injection there was no blood in the pus, and in six days the abscess had dried up.

Chauffard believes, however, that drainage of the abscess is necessary in addition to the use of emetine, if the cure is to be rapid. He feels that the value of the emetine treatment in reducing the mortality from, and the frequency of, amœbic abscesses of the liver will be inestimable. MAURICE CHEVASSU.

Kehr: Congenital Anomalies of the Gall-Bladder and the Hepatic Artery (Über angeborene Anomalien der Gallenblase und der Arteria hepatica). *Zentralbl. f. Chir.*, 1913, xl, 690.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the basis of his own observations and of those reported in the more recent anatomical and surgical literature, Kehr has made a detailed compilation of the anomalies so far observed in the gall-bladder and the biliary ducts and vessels. Among those that are important from the surgical point of view are the absence of the gall-bladder and its misplacement either within the liver or on the left side of the body. Others are the anastomosis of the cystic duct with the hepatic duct at the bifurcation of the latter, a doubling of the hepatic duct, and numerous variations in the course of the hepatic and cystic arteries.

DENCKS.

Miyake, H.: Statistical, Clinical, and Chemical Studies of the Etiology of Gall-Stones, with Special Reference to Japanese and German Conditions (Statistische, klinische und chemische Studien zur Ätiologie der Gallensteine, mit besonderer Berücksichtigung der japanischen und deutschen Verhältnisse). *Arch. f. klin. Chir.*, 1913, ci, 54.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

From the post-mortem material of the three large state universities of Japan the author has compiled the gall-stone findings in over 8000 sections. He reaches the conclusion that cholelithiasis is found in

3.05 per cent of the cases, less than one-half compared with statistics from Germany. The frequency of the affection in women as compared with men was as 3:2. Miyake believes that the German women are more predisposed to this trouble than the Japanese women because they wear corsets. He regards pregnancy as of minor etiological importance. In the Japanese, pigment stones are found most often, cholesterin stones more rarely. Intestinal parasites are a frequent cause of gall-stone disease in Japan. The rarity of cholesterin stones is a result of the national diet. In his investigation Miyake found colon bacilli or other bacilli mingled with the bile. These reached the gall-bladder probably by ascending infection from the intestine, or, much more rarely, by descending from the liver. An absence of hydrochloric acid in long-continued gall-stone disease was also noted quite frequently.

NORDMANN.

Frouin, A.: A New Technique for Establishing a Permanent Pancreatic Fistula; Presentation of Animals and Specimens (Nouvelle technique de la fistule pancréatique permanente; présentation d'animaux et de pièces). *Compt. rend. Soc. de Biol.*, 1913, lxxiv, 1283.

By Journal de Chirurgie.

The method most often used to establish a permanent pancreatic fistula is Pawlow's method which consists in transplanting to the skin the intestinal orifice of the duct of Wirsung after having made an incision in the duodenal wall which is later closed by sutures. According to Frouin, this method is open to criticism. The secretion of the flap of duodenum renders the pancreatic juice impure. Further, the pancreatic juice irritates the skin around the fistula and causes it to become bloody. As a result of this irritation the insertion of a funnel to collect the pancreatic juice causes pain which in turn sets up an inhibition of the pancreatic secretion. Moreover, the contractions of the abdominal wall compress the duct of Wirsung and interfere with its functioning.

The method used by Frouin overcomes most of these difficulties.

First he makes an incision 10 cm. long in the abdominal wall slightly to the right of the median line. Next he frees the duodenum and cuts the duct of Wirsung where it opens into the intestine. He then draws the duodenum up into the wound, and sutures it into the incision in the muscle, making a tampon. A stab wound is made in the skin above the duct of Wirsung; i. e., about 2 cm. from the incision. Often it is helpful in passing the duct to make also a transverse incision of 1 to 2 cm. in the muscles of the wall. The canal is placed in the groove and sutured to the skin.

In spite of the fact that there is some chance of duodenal occlusion and slow contraction of the orifice of the duct of Wirsung, this method keeps any spontaneous or reflex muscular contractions from exerting an effect upon the patency of the duct.

PIERRE CRUET.

SURGERY OF THE EXTREMITIES

DISEASES OF BONES, JOINTS, MUSCLES, ETC.
GENERAL CONDITIONS COMMONLY
FOUND IN THE EXTREMITIES

Mintz, W. M.: The Osgood-Schlatter Disease
(Über die Osgood-Schlattersche Krankheit). *Verhandl. d. Russ. chir. Kong.*, 1913, xii, 201.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Mintz discusses the nature of the localized bone disease that occurs in the tuberositas ossi tibiae. This condition is found usually in young males of from 12 to 17 years of age, and it is the right tibia that is most frequently involved. The author disagrees with the theory of Schlatter that it is due to a tearing off of the tuberosity, for the callus, which according to that theory would form at the site of the porous bony bridge, in reality is much lower and just at the end of the tuberosity. The author doubts that this connecting bridge of the upper and lower ossification center is a locus minoris resistentiae as it lies in a thick layer of cartilage and is protected against fracture. The true nature of the disease can be determined by operative procedure and subsequent microscopical examination. Mintz operated in two of his four cases.

Neither of these cases had ever had any trauma. The first was that of a young man 16 years of age. At the operation a wedge-shaped excision of the diseased focus was made. Complete cure resulted. On macroscopical examination of the diseased part, a marked hyperemia was noted. Microscopical examination showed new formation of bone, rarefaction, and osteoclasia. The second case was that of a boy 15 years of age. For two years the patient had had a painful swelling over the site of the tuberosity of the tibia. He walked with difficulty. Excision was performed. The excised part consisted of cartilaginous and bony tissue and osteoid masses.

All four observations, according to Mintz, disprove Schlatter's fracture theory. Radiographical and microscopical examinations revealed both progressive and retrogressive bone changes. This atypical bone formation is induced by some unknown cause. With the cessation of the growth of the bone the disease stops. Similar processes occur also in other epiphyses, especially in the epiphysis of the fifth metatarsal bone (Iselin), in the olecranon, and in epiphyses to which tendons are attached.

HESSE.

Marie, P., and Leri, A.: Paget's Bone Disease
(Die Pagetsche Knochenkrankheit). *Handb. f. Neurol.*, 1913, iv, 471.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Paget's bone disease is relatively rare, only about 100 cases of it having been described to date. It is a chronic, progressive, and systematic osteopathy which may affect the entire skeleton. Usually,

however, it is confined to certain flat bones and the diaphysis of certain long bones in which it produces hypertrophy and deformation. After a short historical sketch and a few hints as to the etiology, the authors discuss the symptoms. Pain may be entirely absent, but if it does occur it is noted at the beginning of the disease and gradually decreases at the height of it. Usually the tibia is affected most. The Paget skull is the shape of a triangle with the base upward. The forehead and parietal bones protrude as in the hydrocephalic head. The base is particularly deformed, being at times almost a true convexobasis. The authors describe in detail also the condition of the other parts of the skeleton. The X-ray examination shows a complete change in the trabecular structure, a "cotton"-like appearance of the diaphysis and the epiphyses. In the discussion of the differential diagnosis especial mention is made of Marie's pseudo-Paget's disease or senile osteoporosis in which there is no hypertrophy of the bones. In Paget's disease the bones are thick, their volume often being double the normal. They break easily, however, as they are exceedingly porous. According to the findings of microscopical examination rarification in general predominates over condensation.

The author's conclusions in regard to the pathogenesis of Paget's disease are as follows: "All of the theories promulgated by different observers may be true in part. Paget's bone disease, hypertrophic bony sclerosis, may be the result of nutritional disturbances referable to arterial lesions. These arterial lesions themselves may be of different origins. Generally they are due to calcification of the arteries; sometimes to syphilitic arteritis, and sometimes to an arteritis caused by hyperacidity of the blood resulting from an accumulation of mineral acids or the incomplete neutralization of decomposition products. More frequently they may be traumatic arterial lesions or those caused by inflammatory, traumatic, or degenerative processes in the trophic or vasomotor nerves." The treatment, according to the authors, should consist primarily in symptomatic and palliative measures.

HESSE.

Ely, L. W.: Diseases of Joints and Bone Marrow.
Am. J. Surg., 1913, xxvii, 249.

By Surg., Gynec. & Obst.

Joint diseases are divisible into two main classes: (1) proliferation of synovia and marrow, with resulting atrophy of cartilage and bone; and (2) inflammation of synovia and marrow with resulting hypertrophy of cartilage and bone. All joint diseases are probably infectious. Type I includes tuberculosis, chronic gonorrheal and syphilitic arthritis, and rheumatoid arthritis, also called atrophic arthritis, proliferative arthritis, and metabolic osteo-arthritis.

Joint tuberculosis. Too much reliance must not be placed on experimental work. Injection of a tubercle bacillus culture into a joint cavity causes a reversed pathological course. Tuberculosis attacks the epiphysis and not the shaft because of its marked affinity for lymphoid tissue.

The tuberculous process is limited by the cartilage, the periosteum, and the shaft. If it goes beyond the cartilage it does so by extending around it or penetrating through it after having caused degeneration of that tissue by cutting off its nutrition. When the synovia is infected the original tubercle is found in its lymphoid tissue. Apparent enlargement at the joint is due to atrophy of the muscle.

The symptoms include pain, stiffness, swelling, limitation of motion, change in attitude, deformity, disturbance of function, local rise in temperature, bone involvement, muscular spasm, and muscular atrophy. Purely synovial cases are distinctly mild and may elude diagnosis. Abscesses are very frequently formed.

Complications: Phthisis, adenitis, meningitis in children, and amyloid degeneration after prolonged suppuration.

The prognosis for life is good for children. Functional results vary with age. "Painless motion in an adult tuberculous joint is an iridescent dream." Children may recover with good function.

Diagnosis. Tuberculosis may be differentiated from other diseases in Type I by its slow, steady course and uniarticular nature; from those of Type II, by the presence of active inflammation and absence of exostoses.

Local treatment: (1) deprive the joint of function; (2) avoid secondary infection. In general, conservative treatment in children, radical treatment in the adult. Conservative treatment should prevent deformity and deprive the joint of function. It is essential that treatment by apparatus be continued without interruption.

Tuberculin treatment is not of value. Bier's hyperæmic treatment is "worth a trial." Injection of substances into the joint may be harmful.

Radical treatment consists in the destruction of function. Finger and toe joints should be treated by amputation. In the spine, where resection is impracticable, an Albee bone splint should be applied.

Chronic gonorrhœal arthritis. The absence of bony outgrowths (usually), the appearance in the Röntgen plate of the joint itself, and the history place this disease in Type I. Treatment: Set the genito-urinary tract in order; mobilize the joint, under anæsthetic if necessary.

Joint syphilis. There are two forms of joint syphilis, one of which corresponds to the synovial form of tuberculosis and the other to the osseous type. Another form, more frequent, is a proliferative inflammation of the marrow and periosteum of the bone end. Mobilization is useless. Mercury has been our "sheet anchor." Some cases yield to one or two doses of salvarsan after a course of mercury.

The etiology of other diseases of Type I is uncertain. It would be wise to study the bone marrow, the active tissue, in seeking the cause of affection of the passive tissue.

W. A. CLARK.

Bankart, A. S. B.: The Pathology and Treatment of Hallux Valgus. *Med. Press & Circ.*, 1913, xcvi, 33.
By Surg., Gynec. & Obst.

The part played by shoes in the etiology of hallux valgus has been exaggerated. In the majority of cases the deformity is due to flat-foot, and results from tension on the tendons of the great toe caused by the elongation of the skeleton of the foot. The deviation is outward because of the predominance of muscle attachments on the outer side of the toe.

Treatment: The entire head of the metatarsal bone should not be resected, as such resection destroys the anterior support of the arch. Instead, the tendons of the extensor and flexor longus hallucis should be divided, the prominent part of the bone chiseled away, the toe forcibly abducted, and the capsule sewed back to the head of the metatarsal bone. Treatment for the accompanying flat-foot must also be carried out.

W. A. CLARK.

Schwarz, A.: The Etiology of the Bursitides (Zur Ätiologie der Bursitiden). *Wien. med. Wchnschr.*, 1913, lxiii, 1854.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Inflammation of the bursæ at different joints is not due to traumatism alone. Infections and nutritional disturbances due to diseases of metabolism also are primary or secondary causes of the pathological changes. After an attack of angina or tonsillitis the bursæ of the different joints are frequently painful to pressure. This condition gradually improves with the improvement in the primary disease. Micro-organisms may enter a bursa with the blood stream and remain there latent even after the acute infection has ceased, and these, after a second infection or trauma, may lead to atrophy or shriveling of the bursa. A predisposition to rheumatism or gout, gonorrhœa, lues, etc., may also be the cause of the disease. Accurate knowledge of the etiological factors as well as of the anatomical location of the individual bursæ is important, for if the affection is recognized early, errors in treatment will be avoided and stiffening of the joints prevented. Local applications of mud, or better, hot air treatment, energetic massage, and early mechanotherapy usually render good results.

DE AHNA.

Fenwick, W. S.: The Conservative Treatment of Tuberculosis of Joints. *Brit. M. J.*, 1913, ii, 109.
By Surg., Gynec. & Obst.

Fenwick admits the advisability of radical operation in certain adults. Considering some of the dangers of the radical operative procedures in children, he believes that there is the danger of general tuberculosis and tuberculous meningitis. He quotes

the statistics of H. J. Stiles to emphasize this, and says that while radical operations may be usually performed in the more severe cases, he still feels that even better results would be obtained by the conservative treatment in children in the same class of cases. The radical operation is objected to also because it causes considerable shortening. Under treatment, Fenwick advises the use of cod-liver oil and phosphorus and proper feeding, which is very essential in the class of cases at Queen's Hospital, for the children are drawn from the crowded districts of London. The ordinary methods are employed to reduce deformity, and fixation is established by splints. Periodic examinations by X-ray are insisted upon. Bier's hyperæmia is employed as a routine. Iodoform injections are used on the more resistant cases. Abscesses are tapped and injected with iodoform emulsion. Cases resisting this line of treatment are operated on and arthrectomy or erosion is the choice. The author states that he has never amputated in children. He is a strong advocate of the use of tuberculin and advises its use preparatory to operating on any case of tuberculosis. He administers tuberculin either hypodermically or by mouth.

M. S. HENDERSON.

Ehrlich, H., and Maresch, M.: Gangrene of the Extremities and Its Treatment (Über Gangrän der Extremitäten und ihre Behandlung). *Wien. klin. Wchnschr.*, 1913, xxvi, 1058.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

During the last twelve years eighty-one cases of gangrene of the extremities were treated at von Eiselsberg's clinic. Of these, one was caused by electric current, two by embolism, two by freezing, three by ligature of the popliteal artery, forty-four by arteriosclerosis, and twenty-nine by diabetes. The conclusions drawn from this material are as follows: Unless septic processes necessitate earlier operative procedure, the treatment in all forms of gangrene which are not caused by diffuse or progressive diseases of the arterial system should be expectant until there is a demarcation such as in cases of injuries, burns, freezing, etc., in the juvenile. In arteriosclerosis, if the general conditions be favorable, the phalanges should be allowed to separate spontaneously. Exarticulations in the area of the foot are not warranted because they offer but small chance for a permanent cure. In cases where there is an insufficient demarcation, a progressive process, infection complications, or unbearable pains, only amputation can be considered. In senile gangrene the operation should be performed at the thigh. In presenile gangrene good results may be obtained by amputating the lower leg, provided that the extension of the process offers no contra-indication, the pulse is distinctly palpable at least in the poplitea, and the amputated stump bleeds freely during the operation. The only operation on the lower extremities of diabetic patients that is warranted is amputation of the femur.

REHN.

FRACTURES AND DISLOCATIONS

Binney: Report of Eighteen Cases of Separation of the Lower Femoral Epiphysis at the Boston City Hospital. *Boston M. & S. J.*, 1913, clxix, 49.

By Surg., Gynec. & Obst.

The author first takes up briefly the history of the treatment of separation of the femoral epiphysis, contrasting the former mortality and poor results with the present day favorable outcome.

The etiology as quoted from Scudder, Stimpson, and Cotton is hyperextension. The pathology varies with the nature of the injury, Scudder stating that it is compound in 50 per cent. The lesion may be a simple loosening of the epiphysis with slight displacement, and there may be great shifting of the fragments forward and upward in front of the lower end of the shaft, with extensive tearing of the periosteum. The popliteal vessels and nerves may be tightly drawn over the end of the diaphysis like the strings over the bridge of a violin, causing gangrene from arterial thrombosis. The nerve injury is usually to the external popliteal, a number of cases being followed by some degree of toe-drop. As a rule, the edge of the diaphysis presents in the wound.

The author next discusses the mechanical factors affecting displacement, depending upon the attachment of the gastrocnemius quadriceps and popliteus muscles.

Symptoms and diagnosis: Any case of injury to the knee in a patient below twenty years of age is suggestive of epiphyseal separation. The classical factors of these lesions are marked prominence in the region of the patella, with a transverse depression across the thigh just above the patella and the bony prominence in the popliteal space. Mobility just above the knee-joint and a soft crepitus, if present, are suggestive. Pulsation in the vessels of the leg may be wanting with the accompanying pallor and swelling of the extremity. With any considerable amount of displacement there will be shortening of the limb.

The diagnosis from dislocations of the knee is usually easy. In fractures of the lower end of the femur, the bony crepitus and character of the deformity should give evidence by which the differentiation can be made. In many cases, however, the X-ray is the only method by which diagnosis can be made.

The author next lays great stress on the X-ray examination both before and after reduction because of the marked tendency of the lower fragments to assume a malposition.

The danger of some degree of arrest in growth of bone must always be considered. The introduction of a foreign body, such as a nail, screw, or wire, seems to increase the danger of disturbance of growth. Immediate reduction and placing of the divided cartilage in position favorable for growth is of great importance. Also immediate treatment is indicated to relieve pressure on the nerves and vessels.

In simple separation without extensive detachment of the soft parts, fixation in the extended or slightly flexed position is sufficient. In the majority of cases an anæsthetic is necessary. An X-ray examination must be made to insure the maintenance of the correct position. Fixation in acute flexion sometimes helps when other methods fail. When the reduction can not be accomplished by these methods, immediate operation should be done. With evidence of injury to the vessels, acute flexion should not be employed, on account of the obstruction to the circulation.

Compound fractures are treated by thoroughly cleansing the wound; the displacement having been reduced, fixation of the fragment must be secured. Excision of the joint is probably never necessary when easy reduction is obtained.

Conclusions: 1. Owing to danger of subsequent interference with growth, absolute reduction and fixation at the earliest moment is of great importance.

2. Early and repeated X-rays are necessary to control the completeness and permanency of the reduction.

3. In simple cases where immobilization in flexion fails to hold the fragment in correct position from the start, open reduction with the use of a small nail or bone-plate is indicated.

4. In compound separation the same means of positive fixation is to be recommended.

5. The foreign body should be removed soon after union has begun in order to avoid interference with growth. This should be done not later than the third week.

FREDERICK G. DYAS.

Jones, R., and Smith, S. A.: Rupture of the Crucial Ligaments of the Knee and Fractures of the Spine of the Tibia. *Brit. J. Surg.*, 1913, i, 70.

By Surg., Gynec. & Obst.

The X-ray has shown that fracture of the spine of the tibia, often associated with rupture of one or the other of the crucial ligaments, is much more common than is generally supposed.

An investigation by the authors has shown that rupture of one or of both of the crucial ligaments occurs frequently in dislocation of the knee joint.

The authors quote Hogarth Pringle's paper, published in 1907, as the first article to treat of rupture of the crucial ligaments with avulsion of the spine of the tibia. They then describe the anatomy of the articular surface of the knee joint in detail, emphasizing the following facts:

(1) That the anterior crucial ligament is tense when the knee is fully extended, and prevents the tibia from being displaced towards the femur.

(2) That the posterior crucial ligament is tense in complete flexion, and prevents the tibia from being displaced backwards on the femur.

(3) That both ligaments check inward rotation of the tibia.

Hence if after an injury to the knee, the tibia can be displaced backwards and forwards or rotated

inwards in the extended position, injury of one or both crucial ligaments may be diagnosed. The most constant sign of fracture of the spine of the tibia is an obstruction to full extension. FREDERICK G. DYAS.

SURGERY OF THE BONES, JOINTS, ETC.

Gask, G. E.: Autoplastic Graft of Fibula into Humerus after Resection for Chondrosarcoma, with Observations on Bone-grafting. *Brit. J. Surg.*, 1913, i, 49.

By Surg., Gynec. & Obst.

The author first gives briefly a review of the various methods of grafting bone and other tissues that have been in use during the last twenty-five years. He then reports a case of tumor of the humerus, which necessitated the removal of a portion of the shaft three inches long and the implantation of a portion of the fibula from the same patient. The union was good and resulted in complete use of the arm. Measurements showed that the humerus after the operation was three-eighths of an inch shorter, and the circumference of the limb, one-quarter of an inch less than normal. The loss in the fibula was not appreciable. The patient can walk as well as ever and is not weak on the operated side.

Technique: The portion of the humerus affected was removed, together with its periosteum, and the graft of the fibula was inserted with its periosteum intact. No holes were drilled into the graft. All muscular and tendinous attachments of the fibula were carefully dissected off. The bones were not secured in position by any foreign body, such as a screw, peg, or plate.

Conclusions: (1) An autograft of bone under favorable conditions (youth of the individual is a favorable factor) will live and grow. It will certainly grow in thickness, though whether it will grow in length and at the same pace as the corresponding bone of the opposite arm, remains to be proved.

(2) The periosteum of the graft is of service to the bone, both as a limiting membrane and as an active factor in the deposition of new bone.

(3) There is evidence to show that bone will grow without its periosteum and that even marrow alone will survive and deposit new bone. However, until we know more, it is better, when possible, to employ bone that is covered with its periosteum.

(4) Transplantation of the bone from an animal to man, and the use of bone from dead bodies, is merely in the experimental stage. FREDERICK G. DYAS.

Klopfer, E.: Free Transplantation of Fat into Bone Sinuses (Über freie Fetttransplantation in Knochenhöhlen). *Beitr. z. klin. Chir.*, 1913, lxxxiv, 499.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The clinical experience in seven cases was very encouraging, and shows that filling the cavity with living tissue is superior to any method in use at present. The procedure is worthy of recommendation for aseptic as well as infected cases. REHN.

König: Successful Plastic Operation on the Elbow-Joint by Means of Implantation of an Ivory Prothesis (Erfolgreiche Gelenkplastik am Ellbogen durch Implantation einer Elfenbeinprothese). *München. med. Wchnschr.*, 1913, lx, 1136.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

On the strength of a successfully treated case of ivory transplantation into the elbow-joint, König again calls attention to the possibility of utilizing ivory in plastic operations on bones, and particularly emphasizes the simplicity of the procedure.

The patient, a healthy girl, had a spindle-cell sarcoma of the median condyle of the humerus. At the operation almost the entire distal portion of the humerus was removed; only the capitulum and humeri remained. Into the resulting defect an exact ivory substitute previously prepared was inserted and held by two ivory pegs. A few weeks later a plastic operation on the muscles became necessary. The end result was good. The patient has had no recurrence in over a year; has a joint movable over more than one-half of a right angle, and firm in every respect. Extension is possible to 135° , flexion to 85° , and rotation is complete. VON TAPPEINER.

Von Saar, G. F., and Schwamberger, R.: The Ulnar Longitudinal Incision for Operations in the Region of the Volar Surface of the Wrist Joint and of the Hollow of the Hand (Der ulnare Längsschnitt, eine Schnittführung für Operationen im Bereich der Volarfläche des Handgelenks und der Hohlhand). *Zentralbl. f. Chir.*, 1913, xl, 993. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In order to avoid unnecessary secondary injuries and to permit a good exposure of the operative field, the authors have designed an incision in the region of the volar surface of the wrist joint, which they illustrate with drawings. The incision is made in the middle of the space between the flexor carpi ulnaris and the palmaris longus in such a direction that it will strike the narrowest point of the anterior annular ligament. HARF.

Osgood: The End Results of Excision of the Knee for Tuberculosis with and without the Use of Bone Plates. *Boston M. & S. J.*, 1913, clxix, 123.
By Surg., Gynec. & Obst.

The author first discusses the various methods of excision of the knee joint with their modifications, and outlines the method which he advocates as follows: A two- to four-day preparation is given to the knee joint which has preferably been previously fixed in plaster for at least one month. The field is prepared by a benzine-iodine skin preparation and an Esmarch bandage is applied. A U-shaped incision is made extending from the inner femoral condyle downward across the patellar tendon, an inch above the tubercle, and upward to above the outer femoral condyle. Before the skin is cut through, three tiny scratches are made, one at the lower limit of the incision and one on either side, to facilitate accurate skin reposition. The incision is then carried down to the bone, dividing the patellar

tendon. The edges of the wound are swabbed with tincture of iodine. The proximal end of the patellar tendon is seized with double hooks, and the flap, containing skin, fat, patella, diseased tissue and upper cul-de-sac is quickly dissected back, the knee being gently flexed. Much of the tuberculous tissue is removed as the lower end of the femur and upper end of the tibia are isolated. A quick dissection of the upper cul-de-sac is made.

Estimating the desired angle of fixation, the lower end of the femur is sawed off with a flat saw just above the diseased tissue. The upper end of the tibia is next sawed off and a quick dissection of the tissue in the posterior capsule is made. The patella is removed, or its under surface sawed off.

It has been the custom for the last four years, in the absence of a sinus or of a mixed infection, to fix the ends of the bone by means of malleable iron plates, or aluminum wire clamps, one on either side and one in the middle. The patellar tendon is then sutured, the skin flap is replaced, and the leg put up in plaster of Paris.

Fourteen simple excisions had a second operation for re-excision. These cases were secondarily infected. Four had sinuses before the operation, and nine after. Pain persisted several months after the operation in five cases. Eventual union occurred in six. The time of union was two months or less in two, three months or more in eleven; there is no record of eventual union in five.

Comparing these cases with those in which plates or clamps were used, none came to operation for re-excision. One amputation was done outside the hospital. Two had sinuses before operation, and five after. Pain persisted several months only in the amputated case. Eventual union occurred in thirteen. The time of apparent firm union was one month or less in six cases, two months or less in four, three months or more in three.

Conclusion: Comparative statistics of this small series seem to show that the holding of the nicely approximated bone ends firmly together has definite advantages. Post-operative pain is less; early union is favored; the only untoward effect is the occasional removal of the plate. A table of statistics is appended.

FREDERICK G. DYAS.

Schepelmann, E.: Free Transplantation of Periosteum (Freie Periosverflanzung). *Arch. f. klin. Chir.*, 1913, ci, 499.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In a series of earlier experiments the author attempted by transplantation to repair a defect of the trachea with periosteum wound around a piece of glass tubing. Recently he has investigated the conditions which determine whether transplanted periosteum will form new bone. He agrees with other investigators that under favorable conditions it is possible in all tissues to obtain periosteal bone formation in transplanted periosteum. Success is assured more often, however, when the tissues into which the transplant is placed are very vascular and

parenchymatous. The results are so uncertain, however, that it is doubtful whether the procedure will ever be of much practical value. The conditions which determine success to a considerable extent are: autoplasty in preference to homoplasty, the age of the patient, the vascularity of the area into which the periosteum has been transplanted, the integrity of the cells, the permanent union between the underlying layers and the periosteal membrane, and the immediate transplantation of the periosteum, after its removal, into its new bed. The influence of functional stimulus on the formation of bone in periosteal transplants has yet to be determined by further investigations. HELLER.

Petrasczewska: A Case of Free Transplantation of Half a Joint (Ein Fall von freier Transplantation eines halben Gelenks). *Verhandl. d. wiss. Ver. d. Ärzte d. städt. Obuchow-Krankenh.* St. Petersburg, 1913, xxii, 41.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author removed the entire fifth metacarpal bone for sarcoma. He replaced the bone with the fifth metatarsal bone, which was sawed off at its base. The joint end (distal end) was placed into the first phalangeal joint and the sawed end was placed against the os hamatum. Primary union resulted. The function of the newly formed joint is identical with the sound joint on the other hand. The defect in the foot caused no disturbance.

O. VON SCHILLING.

ORTHOPEDICS IN GENERAL

Young, J. K.: Practical Progress in Orthopedic Surgery. *Del. St. M. J.*, 1913, iv, 1.

By Surg., Gynec. & Obst.

The scope of orthopedic surgery includes deformities dependent upon (1) lesions of the bone; (2) lesions of the cerebro-spinal system; (3) impaired nutrition; (4) disturbances of development; and (5) traumatism.

Arthritis deformans. Formerly called "rheumatic gout." From 50 to 80 per cent of the cases are females. The etiology includes trauma, neurotic conditions, pathogenic bacteria, and toxæmias. Still's disease in children is similar but includes more constitutional symptoms.

Serum therapy. The most suitable cases for bacteria treatment are those showing symptoms of toxic absorption but no true septicæmia.

Psoas abscess. Early operation is advised for mixed infection. The incision is made two and one-half inches from the spinous process, midway between the last rib and the crest of the ilium.

Lateral curvature. The most recent and prominent advance in the treatment of lateral curvature is the Abbott method of correction which consists in placing the patient in a specially constructed frame, and, by means of canvas bands, twisting him into corrected position. A heavy plaster cast is then

applied and padding is used to force the body to the concave side. The treatment covers a period of from six to twelve weeks.

Infantile spinal palsy. The greatest advance is in tendon transplantation. Most orthopedic surgeons prefer periosteal implantation.

Sacro-iliac displacement. Goldthwaite's work has revealed frequent ankylosis between the last lumbar vertebra and the sacro-iliac articulation. The displacement may be of the traumatic or of the static variety.

The static variety is composed largely of the neurotic and the uterine types. The symptomatology includes pain, limitation of motion, abnormal mobility, and changes in attitude.

Cerebral palsy. Tendon lengthening and transplantation are of great value, but mental training is also of much importance.

Torticollis. The best age for operation is between six and twelve. The sterno-cleido-mastoid should be divided at the clavicle and the head fixed in an over-corrected position for three weeks.

W. A. CLARK.

Washburne, C. L.: A Study of Congenital Dislocation of the Hip with Report of Six Cases. *Physician & Surg.*, 1913, xxxv, 306.

By Surg., Gynec. & Obst.

Congenital dislocation of the hip was recognized by Hippocrates. Pravacz in 1838 was able to reduce the deformity but could not fixate to prevent recurrence. Lorenz in 1902 popularized the bloodless method. Etiological theories: (1) anomaly in development, (2) intra-uterine pressure. The latter is the more attractive theory. The position of flexion-adduction assumed by the fetal legs is the position in which the minimum areas of joint surfaces are in contact and which, if prolonged and under pressure, is most favorable to a permanent displacement of the head out of the acetabulum. The greater frequency of congenital dislocation of the hip in females is probably due to the fact that in the wider pelvis the acetabulum is in a more posterior-lateral position. The author reports six cases and concludes from his experience that, as a rule, adductor tenotomy is bad practice, that the wedge fulcrum is a dangerous instrument, that the most favorable time for reduction is between the ages of three and ten, and that in patients over ten years open operation is advisable.

W. A. CLARK.

Carr, W. P.: An Operation for Flat-Foot. *Am. J. Surg.*, 1913, xxvii, 270. By Surg., Gynec. & Obst.

In reporting a case of traumatic flat-foot, cured by an unusual operation, Carr says:

"Sawing through the os calcis, between the ankle joint and the attachment of the tendo achillis, slipping the sawn portion of the bone downward three fourths of an inch, and nailing it there, is an operation not difficult nor dangerous."

This relatively simple procedure was carried out by Carr on an electrician 37 years of age. The saw-

ing was easily accomplished with a modified Wyeth saw. The wounds healed promptly, and in six weeks the patient was able to walk better than before the operation. He has continued to improve. The

author recommends this procedure in cases of flat-foot caused by injury and those which are not improved by the ordinary methods of treatment.

PAUL P. SWETT.

SURGERY OF THE SPINAL COLUMN AND CORD

Kleinberg, S.: Abbott Treatment of Rotary Lateral Curvature of the Spine and Details of the Technique. *Surg., Gynec. & Obst.*, 1913, xvii, 32.
By Surg., Gynec. & Obst.

The Abbott method of treating rotary lateral curvature of the spine depends on the theory that the spine is influenced in its motions to the greatest degree when it is relaxed. It is relaxed in the flexed position. Hence the patient is placed for treatment in a hammock suspended in a rectangular frame. The frame has several bars on each side for the attachment of "fixing" and "corrective" bands. The shoulder and hip girdles are fixed and correction is obtained by two bands, made preferably of canvas, which go over the chest and are attached on the side opposite the deformity in such manner that one band pulls sideways and the other backwards, thus tending to correct rotation and lateral deviation. A plaster of Paris jacket is then applied and four windows excised: a very large window over the concavity behind; one over the sternum; one a little outside of the deformity; and one in the axilla on the side of the deformity. Thick felt is used for correction padding. The pads are inserted through the anterior window to correct the rotation, and through the two windows on the side of the deformity to correct the deviation. They are inserted as often as the patient's tolerance and general condition will permit and when the maximum correction in any particular jacket has been attained, a new jacket is applied. The wearers of the Abbott jacket suffer at times a great deal of inconvenience, pain, dyspnoea and weakness. Tachycardia, prostration and other evidences of shock must be guarded against.

Perhaps the best method of judging what correction has been attained is the use of the X-ray, the picture being taken when the patient is outside of the plaster jacket. Thirty-one cases were treated in this manner. Of these, ten gave it up because of the inconvenience and discomfort. Three cases, which were high cervico-dorsal deformities, were given up because no improvement had been obtained. Of the rest, four were over-corrected and the remainder improved in varying degrees.

In conclusion, the author states that the Abbott method is severe; many cases can be corrected by it, especially the milder ones, but the correction is so slow that the treatment must be prolonged.

McGlannan, A.: Ankylosis of the Spine. *J. Alumni Ass. Coll. Physicians & Surg., Balt.*, 1913, xvi, 47.
By Surg., Gynec. & Obst.

There are three varieties of spinal ankylosis. The first is due to inflammatory new bone (spondylitis

deformans). It may be caused by pyogenic bacteria or by trauma. The ossification is beaded along the ligaments and thicker at the discs than at the bodies. The patients are almost always past middle life. The second variety is a "bony metamorphosis of spinal ligaments," fiber by fiber, with no irregular projections (spondylose rhizomelique). The ossification is an adaptive process to supply rigidity following a primary softening of the bone. Proof of this purposeful change is the fact that the position of the ossification is advantageous for resisting the strain. This type of spinal ankylosis usually occurs in young adults. The third type is a repair process such as follows tuberculosis and fractures.

Treatment: Remove the active or dormant source of infection. In cases of spondylose rhizomelique fix by traction.

W. A. CLARK.

Alldrich, H. C.: Bone Transplantation as a Treatment of Pott's Disease. *J. Am. Inst. Homeop.*, 1913, vi, 28.
By Surg., Gynec. & Obst.

The article is a good review of the Albee method of producing bony fixation in tuberculosis of the spine. Nothing new is contributed to the subject. The author reports one recent case with good result and recommends the procedure.

G. I. BAUMAN.

Castelli, E.: Methods of Localization of Spinal Tumors with Reference to Their Medical and Surgical Treatment. *Med. Rec.*, 1913, lxxxiv, 1.
By Surg., Gynec. & Obst.

The author does not classify tumors according to their origin but divides them into (1) extramedullary and (2) intramedullary tumors.

Little is known as to the etiology of the extramedullary tumors. There are several varieties of these, among which are fibroma, angiosarcoma and neurofibrosarcoma. Of the intramedullary, the most common varieties are glioma, tubercle, fibroma, neurofibroma, and fibrosarcoma.

The pathological conditions in the region of these tumors vary greatly according to the class to which the tumors belong. In the case of the intramedullary tumors, the destruction of the tissues of the cord is often very marked and the cord structures may be greatly displaced and thinned out. In the case of the extramedullary tumors, the destructive changes are rare and appear only after the lapse of years.

The symptoms of these conditions resemble the symptoms of compression of the cord. Both have a slow evolution but it is usually possible to distinguish between those of the extramedullary type of tumors and those of the intramedullary type.

In cases of extramedullary tumor, pain is a very constant symptom and is usually the first to appear. The pain is of an aching type, and of remarkable localization, usually in the posterior lateral aspect of the thorax. It is constant and neuralgic and is often increased by effort such as deep breathing or sneezing. Accompanying the pain, but usually appearing later, are areas of painful hypoesthesia and anesthesia. This stage is called the nerve-root phase. Later, atrophy of muscles can be noticed, weakness in the lower limbs, sometimes in all the limbs, follows, and a progressive paraplegia develops. The characteristic feature of the paraplegia is, that while the paralysis is mild, the contractures are very marked. Involuntary movements of defense are often caused spontaneously but may be elicited by a very slight cutaneous stimulation. They consist of dorsal flexion of the foot on the leg, flexion of the leg on the thigh, and of the thigh on the pelvis. Usually the Babinski sign is elicited at the same time. It is very important to determine the exact upper limit at which this reaction of defense can be elicited as it marks the lower limit of the tumor. The cutaneous reflexes are usually abolished at the upper level of the tumor and from this level downward. Therefore, by determining these two zones, the upper limit of the reflex of defense and the upper limit of abolishment of the cutaneous reflexes, the lower and upper limit of an extramedullary tumor can be determined.

In the case of the intramedullary tumor, pain is a rare symptom and is late in appearance. Paraplegia appears early, evolves rapidly, and is usually accompanied by a Brown-Séquard syndrome. The paralysis is real, and although there may often be contractures, they do not predominate over the paralysis. Sensibility is early affected. The superficial sensibility is affected more decidedly on the side opposite the paralysis, the deep sensibility on the same side as the paralysis (real Brown-Séquard). The tendinous reflexes below the compression are exaggerated as in the case of extramedullary tumor.

When the symptoms described above are reviewed, it will be seen that there are many differences between those of the two kinds of tumor. The Wassermann reaction of the spinal fluid may sometimes be misleading as to the etiology of the condition.

Treatment in the case of extramedullary tumor should be surgical, and if the tumor can be reached and removed the prognosis is good. In the case of intramedullary tumor, the consensus of opinion is that there should be no intervention. In rare instances, however, an operation can be performed in two steps as follows: (1) splitting the dura mater over the region of the tumor and (2) removal of the tumor if it has presented itself in the period intervening between operations. The prognosis is grave, however, and intramedullary tumors are apt to recur.

J. H. SKILES.

SURGERY OF THE NERVOUS SYSTEM

Biesalski, K.: The Spastic Paralysis of Childhood and Its Treatment (Die spastische Lähmung im Kindesalter und ihre Behandlung). *Deutsche med. Wchnschr.*, 1913, xxxix, 699.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This study presents the present state of our knowledge in regard to spastic paralysis. The clinical course of the disease is described with special reference to the paralysis, the spasms, and the involuntary motion. Considerable importance is attached to the paralysis, since recently much more has been said of the hypertonus of the contracting muscles than about the motor weakness of their antagonists. It is decidedly more difficult to treat the latter than to weaken the excessive strength of the spastic muscles. The spasms are caused principally by multiple stimuli which travel from the periphery to the center, where, not being controlled by the higher regulating centers, they manifest themselves as involuntary reflex movements. One of the complications receiving special mention is the spastic dislocation of the hip-joint, which has recently been noted in several cases of spastic paralysis. This association may throw some light on the mechanism of the luxation.

Exercise is the most important factor in the treatment as it only can restore co-ordination. Operative

procedures are limited to those that restore proper relations between the component parts of a limb and those that overcome the existing conditions between the single muscle groups by means of tendoplasty and the lengthening of the tendons. In very serious cases Förster's operation of resecting the posterior roots gives good results. It decreases the peripheral sensitiveness and thereby lessens the motor impulses. On the periphery, Spitzzy's neuroplasty and Stöffel's partial neurectomy may be used. The former seeks to raise the motor power of the hypotonic nerve and muscle area by anastomosing to them the partially resected nerve out of the hypertonic area. The latter decreases the motor energy of the hypertonic muscles by resecting the single nerve-branches leading to the muscles. All operations, however, must be followed by careful after-treatment in the way of exercises. Good results can be expected only when the operative interference is regarded as merely the first step toward successful treatment. SPITZY.

Harris: The End Results of Operative Treatment in Thirty-Three Cases of Spastic Paralysis. *Boston M. & S. J.*, 1913, clxix, 82.

By Surg., Gynec. & Obst.

In the five years ending in 1912, there have been operated at the Children's Hospital, Boston, 57

patients with spastic paralysis. The investigation was limited to 33 that could be traced, and of this number 22 were seen at home or in the out-patient department. They comprised 12 paraplegias, 5 hemiplegias, 4 diplegias, and 1 monoplegia. From observations of the results of the operative treatment the author concludes that excellent results in these cases have followed subcutaneous tenotomies, and this has an important bearing on the question as to whether there is danger of permanent and undesirable lengthening of the tendo achillis after free division. Such conditions were especially looked for in the 22 cases discussed and none were noted. It would seem, therefore, that the open operation is not at all necessary.

Children who have not taken a step, have been able to walk as a result of simple division or resection of the adductors and ham strings, and apparently much can be expected from the Tubby procedure of transferring the pronator radii teres to work as a supinator.

Considering the results of treating spastic paralysis by the injection of 80 per cent alcohol into certain nerves, it is shown in the cases reported that a return of the spastic contractures has not been prevented.

R. W. FRENCH

Hohmann, G.: Experiences with the Stöffel Operation for Spastic Paralysis. (Meine Erfahrungen mit der Stöffelschen Operation bei spastischen Lähmungen). *München. med. Wchnschr.*, 1913, lx, 1368. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Hohmann's results with the Stöffel operation for spastic paralyses have been satisfactory. He operated twice on the tibial nerve in the popliteal space for spastic talipes equinus, once on the tibial nerve behind the internal malleolus for talipes cavus, twice on the median nerve above the elbow for flexed and pronated contracture of the hand, once on the median nerve above the wrist joint for flexed contracture of the thumb, and twice on the obturator nerve for adduction contracture of the hip joint. The operations on the median and tibial nerves were for cases of cerebral hemiplegia in children, and those on the obturator nerve for Little's disease.

On some of these tenotomies had been performed previously, and in others the tendons had been stretched or there had been tendon transplantation. In all of them improvement had occurred after these operations, but recurrences had set in. According to Hohmann, the cause of the failures of the previous treatments was that they could not decisively influence the central process which disturbed the muscular balance in the injured extremity. This can be accomplished only by decreasing the excitability in the muscles with the Stöffel operation. After the operation, complete healing of the wound must be awaited, and then a long-continued re-education therapy adopted. This after-treatment is a very essential factor in preventing recurrences. The Stöffel operation is especially adapted to cases of Little's disease and

spastic contractions following apoplexy in adults. It is not suitable for cases characterized by marked choreic movements, or for hydrocephalus and idiocy. On account of its safety it is much to be preferred to the Förster operation.

CREITE.

Ströbel, H., and Kirschner: Results of Nerve Suture (Ergebnisse der Nerven-naht). *Beitr. z. klin. Chir.*, 1913, lxxxiii, 475.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This report of fourteen cases of nerve-suture is especially valuable for the exactness of the details. It is not restricted to casual observations of the operative results, but makes note of the end-results on the basis of subsequent careful investigations.

Thirty-three per cent of the operations were entirely successful; three were complete failures. In one of the latter cases, however, a defect had to be bridged over. Other patients were materially benefited, although single muscle groups remained permanently paretic. The authors emphasize the fact that in cases of injury to the bones that is accompanied by paralysis, the nerve involved should be sought immediately as at that time the repair can be made more easily than later. Sometimes the injury to the nerve consists merely of a contusion by a fragment of bone, and by freeing the nerve a long-continued interruption of its function may be prevented. In the cases reported it was interesting to note that, contrary to our former observations, sensation, and especially the tactile sense, did not return till motor regeneration had taken place. Regeneration takes from six weeks to one year. Repair was always effected by means of simple suture. In one case the walls of a vein were wrapped about the point of suture.

The authors give a report also of two cases of injury to nerve plexus from stab wounds, in each of which the plexus was exposed. In one of these cases the scar tissue was removed from the nerve with partial success; in the other, there was a severe intraneural hæmorrhage, but the paralytic symptoms disappeared after six months without further development. At the end of six years the arm in one of these patients had fully regained its normal function.

SPITZY.

Katzenstein, M.: Nerve Plexus Grafts (Über Plexusfropfung). *Berl. klin. Wchnschr.*, 1913, l, 1165.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In a case of paralysis of the brachial plexus the suprascapular nerve of the healthy side was freed from its bed, from its origin to the incisura scapulæ, and brought behind the carotid artery and the jugular vein, between the œsophagus and the spine, to the diseased side. There it was sutured into an incision made in the plexus. The patient operated upon in this manner was a nine-year-old boy who, except for the ability to extend the fingers and flex the elbow slightly, suffered from complete paralysis of the upper arm. At the end of three months after the operation he was able to move the upper

arm in all directions, to flex the forearm and to extend and supinate it a little, to flex and pronate the hand, and to move the fingers in all directions. In a case of paralysis of the lumbo-sacral plexus the obturator nerve of the healthy side was liberated

in its entirety and carried behind the internal and external iliac arteries to the diseased side. This operation has been performed only once on the human being and such a short while ago that nothing can be said as yet in regard to the result. WREDE.

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

Hendry: Report of an Interesting Bacteriological Finding in a Case of Pemphigus. *Surg., Gynec. & Obst.*, 1913, xvii, 85. By Surg., Gynec. & Obst.

Hendry reports the findings of a hitherto undescribed, anaërobic, slightly motile bacillus, isolated from the blebs of a case of pemphigus. The method of procedure was as follows: The surface of the bleb was seared and the fluid aspirated. The usual skin-contaminating organisms were found in aerobic culture; but cultures grown on human muscle anaërobically showed in from one to three weeks small white colonies. On microscopical examinations these colonies were made up of a very small, short, slightly motile bacillus in pure culture. No growth could be obtained by transfer to ordinary media, either aerobically or anaërobically, though transfers to new bits of human muscle were always successful.

A vaccine from the organism was prepared and given in increasing doses, the patient showing some improvement during the administration. The author does not feel that this is a proof of the curative value of the vaccinations, but suggests that it warrants more extensive investigation along these lines.

Loeb, L., and Sweek, W. O.: Histogenesis of Multiple Carcinoma of the Skin. *J. Med. Research*, 1913, xxviii, 235. By Surg., Gynec. & Obst.

Loeb and Sweek observed the changes that occurred in pieces of tumor that were removed from a patient affected with multiple carcinoma. The patient was a young man 33 years of age. The tumor, a growth of 12 years' standing, was located on the right side of the chin under the lower lip. About 3 years previous to the removal of the growth the patient was given Röntgen-ray treatment. At the time of its removal the tumor had involved the entire side of the face, part of the nose, the skin in the angle of the eye, and some superficial parts of the lower lip, so that in reality there were a number of definite and distinct lesions. The authors summarize their conclusions as follows:

The formation of multiple carcinoma of the skin depends on a primary increase in activity of certain parts of the epidermis. In this we have to deal with an affection of the epithelial cells which is independent of proliferative changes or of collections of round cells in the connective tissue, and of attractive influences of the blood vessels. In our case the proliferating energy of the epithelium which led to the formation of the multiple carcinoma was rela-

tively small. The infiltrating power of the proliferating epithelium was equally slight. In consequence of slight infiltrating power we may have an outgrowth of epithelium into the air instead of a downgrowth into the underlying cutis. In a certain relationship to deficiency in proliferating and infiltrating power stands perhaps the inability of the proliferating epithelium to undergo the normal metamorphosis of the surface epithelium into keratohyalin and keratin.

GEORGE E. BELLBY.

Joffe, M.: Free Fascial Transplantation; Experimental Investigations (Zur Frage der freien Fascientransplantation; Experimentelle Untersuchungen). *Chir. Arch. Veliaminova*, 1913, xxix, 466. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author carried out a series of experiments in free fascial transplantation, using the fascia of the tractus ileo-tibialis or that of the anterior sheath of the rectus. The transplantations were performed on the stomach, the colon, the urinary bladder, and the liver of cats. Thirteen of them were made on the stomach. Defects were first made in the wall of the stomach and then the mucosa alone was sutured. Next, the defects in the serosa and muscularis were closed with fascia. In one case the mucosa was not sutured before the fascia was transplanted. In this instance fascial necrosis and peritonitis resulted. In all of the other cases (the time of observation was 73 days) the results were good. At the end of 7 to 8 days there was complete union of the fascia with the stomach wall. The fascia was alive and new blood vessels had formed in it. The mucosa and submucosa had regenerated. The defect in the muscle remained. The fascia resembled a tendon. The nutrition of the fascia was derived from the walls of the stomach. In many cases adhesions had formed between the fascia and the omentum and a part of the new blood vessel formation was derived from the omental vessels. Adhesions to the omentum could be prevented only by resection of the omentum. The same results were obtained by the author in transplanting fascia into the bladder and colon. At the end of 62 days the urinary bladder had a perfectly normal appearance. When the mucous membrane defects had not been sutured, gangrene of the transplant and peritonitis always resulted. The experiments on the liver for the purpose of checking hemorrhage also gave good results.

On the basis of his work the author comes to the conclusion that fascia can be transplanted with

good results into the peritoneal cavity, especially for the purpose of reinforcing doubtful suture lines. As the fascia does not contract, stenoses do not result at the site of the transplantation. On the inner side of the fascial transplant new epithelium is formed in about 50 days, and the secretory function of the stomach therefore does not suffer.

To these experiments the author adds a description of a case of fæcal fistula following appendicitis, from the Manteuffel clinic. In this instance when the mucous membrane was sutured a piece of fascia from the anterior rectus sheath was sutured over it to reinforce it. With the exception of partial fascial necrosis complete recovery resulted. HESSE.

Kornew, P.: The Free Transplantation of Fascia (Über die freie Fascientransplantation) *Beitr. z. klin. Chir.*, 1913, lxxxv, 144.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Kornew gives an exhaustive review of the abundant experimental and clinical material concerning

free fascia transplantation. His own material is divided into a clinical and an experimental part. His numerous experiments confirm and supplement previous work. A new feature is the successful closing of defects in the chest wall by transplantation of fascia. Eighteen cases are reported. The procedure was used in twelve cases to strengthen the muscle sutures in operations for inguinal hernia, and once each to close the internal ring in crural hernia, to close a defect in hernia pulmonalis, to repair a defect in the pleura in a penetrating wound of the chest, for a plastic operation on the sphincter in place of Thiersch's metal ring in a case of prolapse of the anus, to fix the testicle in a case of retention of the testicle, and to mobilize an ankylosed mandibular joint. In all except one case there was union of the transplanted fascia and the clinical results were satisfactory. The author does not give a sufficient number of references to the literature nor substantiate his statements by clinical evidence either for or against his procedure. REHN.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESES, ETC.

Tyzzer, E. E.: Factors in the Production and Growth of Tumor Metastases. *J. Med. Research*, 1913, xxviii, 309.
By Surg., Gynec. & Obst.

In this study and series of experiments the author attempts to answer the following questions:

In patients in whom metastasis has already occurred will the growth of the secondary masses be accelerated by the removal of the primary tumors, and will such removal shorten life or prolong it?

Do the procedures followed in the course of physical examinations and surgical operations increase or diminish the incidence of metastases?

In his experiments Tyzzer made use of mice, and the results he obtained seem to furnish rather conclusive proof that mechanical force is an important factor in the causation of metastasis. Moreover, the author is convinced that metastasis is dependent also upon a number of other determinable factors, of which the biological character of the tumor tissue is of first importance. In certain propagated tumors second deposits are rarely or never observed, while in others they are frequent. This is true also of the various types of spontaneous tumors. Tyzzer believes that the mechanism by which tumor cells are set free in the circulation depends to a great extent upon the structural character of the tumor and the peculiarities of its growth; undoubtedly also to its age and size. This his experiments clearly show. Metastases of the tumor of the waltzing mouse may be produced experimentally by the application of intermittent pressure such as massage or gentle pinching. The results obtained

in this investigation, according to the author, find practical application in the management of tumor patients. From them every physician should realize the irreparable harm that may result from the manipulation of malignant tumors in their early development. GEORGE E. BEILBY.

Stewart, J. C.: The Malignancy of Giant-Celled Sarcoma. *Surg., Gynec. & Obst.*, 1913, xvii, 30.
By Surg., Gynec. & Obst.

The object of this article is to disprove by the citation of cases the statements made freely in current literature that giant-celled sarcoma is benign and never forms metastases. Two cases are cited, both of which caused death, and one of which formed several metastases. The first was that of a central giant-celled sarcoma of the metatarsus; death resulted from multiple metastases. The second was that of a central giant-celled sarcoma of the humerus which caused a pathological fracture of the bone, and death by local recurrence.

Falta, W.: Diseases of the Glands of Internal Secretion (Die Erkrankungen der Blutdrüsen). Berlin: Springer, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Falta's clinical work is an excellent supplement to Biedl's classical work on the experimental physiology and pathology of the internal secretory glands. These he defines as glands that excrete directly into the circulation a hormone with powerful physiological effects. Adrenalin is the only one that is defined chemically. Each ductless gland has its specific function. They cannot compensate for one another, although disease caused by abnormality of

function in one may be modified by a pathological condition in another. The great variety in symptomatology may be explained as being due to disturbances in these glands and to differences in the constitutions of the patients.

The diseases of the thyroid gland are divided into two classes, those characterized chiefly by local symptoms, such as goiter, tumors, and inflammations, and those characterized by an increase or decrease in the secretory function. Basedow's disease is caused by hyperactivity of the thyroid with secondary involvement of other glands. Falta does not believe in the combination of Basedow's disease and myxœdema recognized by many experienced surgeons; he concludes that the myxœdematous symptoms are the result of insufficient functioning of the hypophysis. He does not attach much importance to the involvement of the thymus. Operation should not be advised for mild cases in patients in good circumstances, or those with neuropathic tendencies. Long delay is unwise. The advice frequently given to refrain from operation when the X-ray shows a thymus shadow is not approved. Falta has observed good results from X-ray treatment. On account of the sclerotic changes in aplasia of the thyroid, old age has been compared with chronic myxœdema, but reckless thyroid medication in old age must be avoided. Sporadic cretinism is a hypothyroid or a thyroid condition of a poorly-developed organism. The more severe forms are characterized by lack of development of the bones and blood-forming organs, the ductless glands, and the central nervous system.

Mild cases of thyroid weakness recover spontaneously or under treatment with thyroid tablets. In severe cases the ideal treatment by transplanting a new thyroid is not possible, for only auto-transplantation has permanent results. While thyroid medication is effective in the myxœdema of adults, in sporadic cretinism it is of value only in the milder forms and when begun very early. In such cases the effect on growth is very marked. Endemic cretinism and goiter are related. Goiter is caused by drinking-water, and is due probably to a toxin or toxalbumin of organic origin. Iodine treatment is effective in proportion to the degree to which the changes are hyperplastic rather than degenerative. Falta believes that endemic and sporadic cretinism are not identical and that thyroid disturbance is not the only cause of the endemic form. The toxin of cretinism injures the central nervous system and other tissues as well as the ductless glands directly. The thyroid factor may be of greater or less importance. Therefore, thyroid medication varies in effectiveness in different cases.

Tetany has been shown to be the result of insufficiency of the epithelial bodies, which are found in the thymus as well as the thyroid. These bodies produce a hormone which influences the calcium metabolism in the central nervous system. When they are deranged in function there is loss of

calcium in the ganglion cells of the spinal cord and consequently a condition of hyperexcitability. Different forms of tetany are discussed. The epithelial bodies continue to function in auto-transplantation of the thyroid. Opinions differ as to the value of calcium medication. Falta has seen no effect from it. There are some errors in the section on diseases of the thymus. Hyperfunction of the hypophysis causes acromegaly. There is an interesting discussion of the causes of a combination of acromegaly with symptoms of Basedow's disease or myxœdema. Decreased activity of the hypophysis causes hypophyseal dystrophy. Administration of an extract of hypophysis is effective. Cysts and gummata may occur in the epiphysis. Tumors are found chiefly in young males, so that it is probably a question of congenital abnormality of development. Pressure symptoms and trophic disturbances are marked — precocious development of the body and premature development of the genitals. We think it possible that the trophic effects of pineal gland tumors affect the suprarenal glands, causing hyperplasia. Operation has never been attempted.

In Addison's disease there is lymphocytosis, and frequently status lymphaticus, hyperplasia of the thymus, and atrophy of the genital glands. Decreased function of the suprarenal glands is caused generally by tuberculosis or tumors, but may result from hæmorrhage or thrombosis. Sclerosis may be caused by syphilis. The special affinity of diphtheria toxin for the suprarenal glands is noteworthy as a cause of heart failure. Adrenalin is a hormone affecting this sympathetic system. It is used with good results subcutaneously in collapse, and by the mouth for abstracting œsophageal cancer and for phosphorus poisoning. Hyperfunction of the suprarenals may be caused by tumors of the chromaffin tissue. Adenoma of the cortex may cause increased development of the body and premature development of the genitalia with various abnormalities in the sexual sphere. Early castration causes incomplete development of the genitalia and increase in stature. Late castration causes contraction of the prostate. Eunuchoids, without being castrated, resemble eunuchs. This condition sometimes occurs in adult life as a result of diseases of the genital glands (trauma, syphilis, gonorrhœa, gummata, sexual abuse, alcoholism). In sexual defects in men, thyroid, radium and pituitrin treatment is recommended, and in women, organotherapy and transplantation of the ovaries.

Falta's multiple ductless-gland sclerosis is an infectious disease that involves the greater part of the ductless gland system. It can be diagnosed clinically from symptoms of hyperthyroidism, eunuchoidism, insufficiency of the hypophysis, symptoms of Addison's disease, and cachexia. There is no definite picture from the point of view of pathological anatomy. Falta explains gigantism as an abnormal predisposition of the entire ductless gland system. Infantilism is due to a developmental disturbance of the entire organism of which the

faulty development of the ductless glands is only a part.

Mongoloids are the result of exhaustion; that is, they are the last-born of families with numerous children. In the chapter on the pancreas Falta says that pancreatic lithiasis is frequently combined with cholelithiasis and that it is part of a family tendency to stone-formation, which leads to indurative pancreatitis with glycosuria in 34 to 35 per cent of the cases. The question of the relation between the trauma and diabetes is important surgically. Sugar is found in 23 per cent of head injuries.

The concluding chapter treats of the different forms of obesity. Adipose dolorosa is not thyroid in origin, though thyroid treatment often shows good results. Falta has contributed much to the understanding of this very difficult subject by his clinical material. The illustrations are very helpful. The bibliography aids special study. KLOSE.

SERA, VACCINES, AND FERMENTS

Lesser, K., and Kögel, H.: Experimental and Clinical Results Obtained with Rosenbach's Tuberculin (Über Tuberkulin Rosenbach; Experimentelle und klinische Erfahrungen). *Beitr. z. Klin. d. Tuberkul.*, 1913, xxvii, 103.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors attempt to answer the three following questions: 1. Are there differences in the form of tuberculosis in treated and untreated animals? 2. Is there a difference in animals treated with old tuberculin and with Rosenbach's tuberculin? 3. Do the preparations have a specific effect on the animal body? Nine guinea pigs were injected with 1 mg. each of a strain of tubercle bacilli of the human type grown directly from the sputum. Nine others were injected with 0.5 mg. each of a culture of bacilli. All of the infections were severe. Some of the animals were treated with Rosenbach's tuberculin, some with old tuberculin, and some not treated at all. A few of the animals were killed soon afterward, and the blood was withdrawn for the purpose of demonstrating by complement fixation tests whether it contained antibodies.

In the first series, the animals treated with old tuberculin seemed to show greater length of life than those treated with Rosenbach's tuberculin. In the second series there was no marked difference. As to the form of the tuberculosis, the treated and untreated animals showed no difference. The former did not live any longer than the latter. In the animals which lived longest, whether they were treated with Rosenbach's tuberculin or with old tuberculin, glandular and pulmonary tuberculosis was most marked, while in those that died early, general miliary tuberculosis was the prevailing form. In answer to the third question, it was found that there was no fever, disturbance of the general health, or infiltration around the site of the injection. A fall of temperature after an injection of 5.5 ccm. of the Rosenbach tuberculin, resembling an anaphy-

lactic attack, was noted as a specific effect of tuberculin. The complement fixation tests showed the presence of specific antibodies against the Rosenbach tuberculin. Genuine recoveries were not observed with either form of tuberculin. Rosenbach tuberculin is to be regarded as a mild form of tuberculin.

With regard to the clinical effects noted, Rosenbach tuberculin showed only a cutaneous reaction and this only exceptionally and when given in concentrated solution. For the intracutaneous reaction it was shown to be 1000 times less effective than the old tuberculin. In the diagnostic subcutaneous test the Rosenbach tuberculin always showed a marked reaction around the site of injection. The general symptoms were more violent and more unpleasant than those caused by the old tuberculin. Marked infiltration, pain, and lymphangitis were frequent. The reaction at the site of injection which appeared even with the smallest doses that had no other effect, were to be explained not only as being purely a specific effect of tuberculin, but as due partly to the albumose content (trichophyton products). Perceptible focal reactions appeared only after injections of 1 mg. of Rosenbach's tuberculin; therefore 5 mg. is not sufficient for a diagnostic injection.

In diagnosis the Rosenbach tuberculin has no advantages. It was used therapeutically on twenty-one patients according to Rosenbach's directions, but probably with more cautious dosage. High temperatures could not be avoided in many cases. The cases used for treatment were severe but not hopeless. The severity of the local reaction several times necessitated giving up the treatment. The influence on the general condition and the subjective symptoms was as a rule good. In twelve cases the clinical findings and the general condition were markedly improved. All of these cases were tolerant of the Rosenbach tuberculin, while those that turned out badly reacted much more strongly. The authors attribute the failures, severe reactions, etc., partly to the fact that the cases selected for the treatment were unsuitable. Acute and subacute cases with extensive distribution should be excluded. Reactions should be avoided. In the dosage it is to be noted that focal reactions appear sooner than general reactions, and, especially in severe cases, a cumulative effect must be counted on. Large initial doses should be avoided. Toxic substances are small in amount as compared with antigens but they are present. The presence of foreign, non-specific albumoses is a disadvantage, for they are in part responsible for a marked local reaction. HARRASS.

Lewin, C.: The Treatment of Cancer Patients by Vaccination (Die Behandlung von Krebskranken mit Vaccination). *Therap. d. Gegenw.*, 1913, liv, 253.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author's experiments on animals convinced him that autolysins of tumors have a beneficial

therapeutic action. The results justified the application of the principle to the treatment of human beings. An autogenous vaccine was made from the extirpated tumors to test their therapeutic value in lessening recurrences and destroying metastases. The author cites two cases that were affected favorably by the vaccine, and very emphatically recommends its use in suitable cases of cancer. SZÉCSI.

Ruediger, E. H.: The Duration of Passive Immunity Against Tetanus Toxin. *Philippine J. Sc.*, 1913, viii, 139. By Surg., Gynec. & Obst.

The attempt is made to determine the duration of passive immunity against tetanus toxin by a series of experiments upon both horses and guinea pigs. The experiments are grouped under the following three heads:

1. The duration of passive immunity in the horse, after the injection of homologous antitetanic serum.
2. The duration of passive immunity in the guinea pig after an injection of antitetanic serum from the horse, preceded by repeated injections of antitetanic serum from the horse.
3. The duration of passive immunity in the guinea pig after an injection of antitetanic serum from the horse, preceded by repeated injections of normal horse serum.

The author reaches the following conclusions:

1. The subcutaneous injection of 1,500 units of antitetanic serum from the horse into the horse confers passive immunity of between six and eight weeks' duration.
2. Guinea pigs subjected to repeated inoculations with antitetanic serum from the horse do not acquire the power to eliminate it more rapidly; they acquire a tolerance as is shown by a longer immunity.
3. Guinea pigs treated with repeated injections of normal horse serum acquire a passive immunity following the injection of antitetanic serum from the horse, that is of longer duration than the immunity of untreated guinea pigs. J. H. SKILES.

BLOOD

Ordway, T., and Kellert, E.: The Complement Content of the Blood in Malignant Disease. *J. Med. Research*, 1913, xxviii, 287.

By Surg., Gynec. & Obst.

The authors have noted that in many cases of cancer and leukæmia the blood shows such striking numerical and morphological changes as to make it seem possible that alterations in the function of the cells or plasma might be detected by examining certain biological properties of the serum. Their article deals with the hæmolytic power of the serum, with particular reference to its complement content. By their studies it seems proven that in the majority of cases the hæmolytic complement content of the blood serum in the different varieties and stages of human cancer is relatively constant. The amount is practically the same as that found in health and in persons suffering with certain other diseases.

Such human serum in most cases contains one-tenth to one-twentieth as much hæmolytic complement as pooled serum from adult guinea pigs.

There is no increase of hæmolytic complement in myelogenous or lymphatic leukæmia. The hæmolytic complement content of the plasma of citrated human blood does not differ from that of the serum.

GEORGE E. BEILBY.

Friedman, M.: Prolonged Intravenous Infusions (Über intravenöse Dauerinfusion). *München. med. Wchnschr.*, 1913, lx, 1022.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Proctoclysis is destined to supercede subcutaneous and intramuscular infusions. However, in cases in which the patient is unable to retain the fluid the retention of which causes — as in peritonitis — unpleasant sensations of fullness in the abdomen, the intravenous infusion of Haidenhain is the best method for administering fluids as well as medications. It has been shown that a rapid intravenous infusion, especially with the addition of larger doses of adrenalin, produces a marked increase in the vascular tonus and is dangerous for the heart. The author, therefore, has adopted the method of prolonged intravenous infusion, according to which only small quantities are infused at a time and the period of infusion is extended over many hours. The technique is the usual one, except that the cannula, the arm, and the funnel filled with the fluid must be securely fastened. To regulate the flow, a pinch-cock is attached to the rubber tube.

Friedman has obtained the following impressions from his method: (1) That in the administration of salt, adrenalin, and digalen solutions by the drop-method the blood pressure rises, not suddenly, but gradually, and remains at the same level during the period of infusion. (2) That this method has no by-effects. (3) That it causes no excessive burden for the heart. (4) That with slower infusions the heart can sustain larger quantities of fluid, so that a better flushing out of the organism and diuresis are obtained. NEUMANN.

BLOOD AND LYMPH VESSELS

Geinitz, H. T.: The Treatment of Varices with a Spiral Incision (Zur Behandlung der Varicen mittelst des Spiralschnittes). *München. med. Wchnschr.*, 1913, lx, 1257.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports the later results obtained by Rindfleisch's operation for varices performed at Garré's clinic. In six cases the immediate result did not seem satisfactory, but the later examination of five cases, one and one-half to two years after the operation, showed a surprisingly good result. The ulcer cruris recurred only once and then it did not cause trouble. For diffuse varices and in cases where simple ligating methods have failed, the spiral incision is recommended, though a sure and ideal result cannot be guaranteed. WOLFF.

POISONS

Fejes, L.: Coli Sepsis (Über Kolisepsis). *Beitr. z. Klin. d. Infektionskrankh. u. z. Immunitätsforsch.*, 1913, i, 575. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Beside its morphological and biological characteristics, the ability of the bacillus coli to alter its virulence and to take on a decided pathogenic character is the cause of the general infection known as colibacillosis. The infection may be ectogenous and, like typhus, be caused by contaminated drinking water. Also ectogenous are the poisonings of meat caused by the bacillus coli. In these cases the bacilli involved vary so greatly from the normal type of colon bacillus that they have been regarded as a special type, described as the paracolonic bacillus and supposed to stand between the typhus-paratyphus bacillus and the typical colon bacillus.

More frequent than the ectogenous infection is the endogenous infection of the organism with its own bacilli. It is not yet definitely known just what causes the change in the virulence of the bacilli in this case, but it is believed that changes in the intestinal wall are chiefly responsible. The symptoms of the infection are varied, due to the fact that the infection may start in various parts of the body. However, chills and very high temperature followed daily by decided drops make the temperature curve of the condition very characteristic. Localized foci, endocarditides, broncho-pneumonic processes, suppurations in the different organs, etc., all have their own particular symptoms. The diagnosis may be confirmed by cultures made from blood taken shortly after the chills or from pus from a local suppuration. In the general infections originating from the intestinal tract the bacilli enter the blood by way of the local foci in the intestinal wall through anatomical lesions or disturbances of the intestinal circulation.

To these infections belong, beside coliangina, diseases of the vermiform appendix, peritonitis, dysenteric processes caused by amœbæ or bacilli, typhus abdominalis, and cholera. More distantly related are the ascending infections of the bile duct caused by biliary engorgement, the results of which are lithogenous catarrh and calculous cholangitis, which are the forms of local affections of the biliary apparatus that are the entrance foci for the general septic infection. The urinary tract, which often under nearly normal conditions contains bacillus coli, is infected from without by hæmatogenous infection of the kidneys or from the lymph ducts of the neighboring organs, and particularly those of the rectum. Also in this case stasis and trauma may be the cause of the change in the virulence of the bacilli and of the resulting general septic symptoms which originate as a rule from bacillus coli infection of the pelvis of the kidney. A description is given in the article of colibacillosis in puerperium and after septic abortion. An extensive bibliography is appended.

W. GOEBEL.

SURGICAL THERAPEUTICS

Burnham: Hexamethylenamine in Surgery. *Med. Rec.*, 1913, lxxxiv, 15. By Surg., Gynec. & Obst.

The main use of hexamethylenamine in therapeutics until very recently has been in the treatment of disorders of the urinary tract. It has been shown that the drug appears in the urine within an hour or so after administration, and, along with it, an appreciable amount of formaldehyde is found. The antiseptic properties are in all probability due to the formaldehyde. Lately the drug has been found in the cerebro-spinal fluid, blood, bile, saliva, middle ear, anterior chamber of the eye, and in many other regions of the body.

The use of hexamethylenamine, according to the author, is indicated in most surgical conditions accompanied by inflammation. In cystitis, pyelitis, meningitis, acute cholecystitis, middle ear infection, and in many other conditions its use has been accompanied by marked improvement. It should be given also as a prophylactic measure before catheterization or cystoscopic examination. In compound fractures of the skull it seems to prevent a succeeding meningitis in some cases.

It should be given in fairly good-sized doses, usually from 40 to 60 grains daily. In some conditions, such as meningitis and cholangitis, even as high as 300 grains may be given in the 24 hours. Irritation of kidneys and stomach may be largely avoided by giving plenty of water and alkali. J. H. SKILES.

ELECTROLOGY

Jackson: Conservative Surgery from a Röntgenologic Standpoint. *Am. Quart. Röntgenol.*, 1913, iv, 209. By Surg., Gynec. & Obst.

Most cases of malignant tumor should not be considered operable since they cannot be cured by operation. If a neoplasm will recur in a few months after operation, the case should be refused by the surgeon and palliative measures only used. Most malignant growths of the larynx are incurable by operation. Out of seven hundred cases seen by the author, one out of fifty-two was operated. The other fifty-one were refused operation because of their type or position, or both. The growth after recurrence is much more destructive of life than if it had not been treated surgically. A few laryngeal neoplasms situated at the anterior commissure can be extirpated completely without recurrence. The majority involve the posterior lymphatics communicating with those in the neck or the tissues adjacent to the œsophagus.

A plea is made for the further development of the technique in radiotherapy, which gives in most cases a beneficial palliative result and, in some, a permanent cure. This method should be more widely used instead of surgical operations, which after a short period hasten rather than palliate the disease. The author has already seen in radiotherapy sufficient benefit to encourage therapists to give more attention to growths of the larynx. HOLLIS E. POTTER.

GYNECOLOGY

UTERUS

Obata, J.: A Statistical Contribution to the Morphology of Uterine Carcinoma (Statistischer Beitrag zur Morphologie des Uteruscarcinoms). *Arch. f. Gynäk.*, 1913, xcix, 474.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author examined the Meyer collection of microscopic preparations of carcinoma of the uterus in order to compare them with the preparations of Schottländer and Kermauner and their classification according to morphological characteristics. He makes the following groups: 1. Primary solid tumors. 2. Primary glandular, in part secondary, solid tumors.

Among two hundred and forty-four cases of uterine carcinomata there were one hundred and thirty-four primary solid tumors and one hundred and twelve primary glandular forms. Among the primary glandular tumors there were forty-seven pure glandular and sixty-five primary glandular forms, which, however, had to be considered secondary solid tumors. Among the one hundred and twelve primary glandular carcinomata there were eighty-eight corpus and sixteen cervix carcinomata and one portio carcinoma; in seven cases a decision was impossible. Among two hundred and forty-four uterine carcinomata there were twelve pure glandular forms without a mixture of the epithelium. Nine of these were situated in the corpus and three in the cervix and they were considered by the author to be malignant adenomata.

A description is given of the glandular form, with and without multiple layers of the epithelium, and also of the primary glandular forms, including the secondary solid carcinomata. In the series of one hundred and thirty-four primary solid tumors there were one hundred and twenty cervical, and eleven corporal, carcinomata. In three no classification was possible. The author divides these into large, small, and mixed alveolar types, and, upon the basis of the quantity of interstitial tissue, into medullary, scirrhous, and mixed types. Among one hundred and thirty-four primary solid carcinomata there were fifty-four large alveolar, twenty-four small alveolar, forty-three mixed alveolar, and twelve diffuse forms; sixty-two scirrhous, sixty-five medullary, and three mixed types in which the diffuse form was classified as belonging to the medullary type.

The author tabulates these carcinomata as do Schottländer and Kermauner, according to the relation between the interstitial tissue and the cancer-cell nests and also according to the degree to which the cancer cells have migrated into the lymph stream and tissue clefts. Among one hundred and seventy-

one cases there were fifty-two corporeal and one hundred and fourteen cervical carcinomata; in five no decision was rendered. More detailed information in regard to the structure of uterine cancer, with respect to giant cells, glycogen, mucin, infiltration, vessel formation, extension by way of the bloodstream and lymphatics, central degeneration of cancer-cell nests, and atrophy of the cancer cells will be found in the original work. MORALLER.

Pinkuss: Treatment of Cancer with Mesothorium Emanations (Krebsbehandlung mit Mesothorbestrahlung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Pinkuss has, so far, successfully treated twenty-two cases of cancer with mesothorium emanations. His results improve with the improvement in his technique. He also observed deep-reaching actions of the γ -rays. Continued raying of the cancer area enables one to reach deeper and deeper portions in the course of time. However, this favorable result may be undone by the formation of metastases in the meantime. The success of mesothorium raying depends on the way in which the cancer extends and especially on the degree of malignancy. The permanent results are more favorable in slowly growing cancers which occur especially in older people.

The danger of injuring neighboring organs such as the urinary bladder, adherent intestinal loops, and the ureters, should not be overlooked. Pinkuss noted severe hæmorrhage from the uterine vessels during the raying of a cancer crater reaching laterally into the parametrium. The use of mesothorium is indicated in cases of cancer which are not operable on account of the age of the patient or other severe organic diseases, in all inoperable cancers and recurrences and as a prophylactic to recurrence following operations.

Considering the recent views of cancer, he uses, besides the raying, other medicinal measures, as the intravenous injections of Thor-x and atoxyl and internal doses of Thor-x and pancreatin. He never observed an objective success with the use of Thor-x given either per os or intravenously without using other additional measures of treatment. A dangerous side-action of intravenous injections of Thor-x is not to be feared if the dosage is watched. The combined method of treatment makes it possible to use medium doses of mesothorium. The author had encouraging results with the use of mesothorium in myomata and metropathia hæmorrhagica. These treatments were begun during July, 1912. In seven cases of metropathia, amenorrhœa was induced

in three, and oligomenorrhœa in three. In four cases of myomata he obtained amenorrhœa twice. The cases have been under observation for several months. The duration of the treatment was between six and twelve weeks.

Vautrin: A Consideration of Cystic Tumors of the Uterus of Congenital Origin (Considération sur les tumeurs kystiques de l'utérus d'origine congénitale). *Ann. de gynéc. et d'obst.*, 1913, x, 352. By Journal de Chirurgie.

In connection with a description of two cases of submucous tumors of the uterus, one of which caused an inversion of the uterus in a young girl and was examined histologically, Vautrin protests against the general tendency to believe that all cystic tumors originate in the Wolffian ducts.

Without doubt the Wolffian ducts, which are closely connected with the Müllerian ducts, are the cause of a certain number of these cyst formations, but malformations of the ducts of Müller also play an important part.

Since malformations of the vagina have been ascribed to deviations in the ducts of Müller, and since any anomalies in shape, position, and development of the tube are likewise related either to lack of development or to over-development of these ducts, why not also admit that an exaggerated growth is possible even in the uterus itself? In the development of the genital organs various evolutions in the epithelium are noted. Thus, the epithelium differs in the corpus, the cervix, and the portio. Numerous budding phenomena are observed in the formation of the uterus and its numerous glands. An aberration during these profound changes would not be impossible.

According to Meyer, the encysting that affects the organs of Müller might take place at the three following periods: 1. When the two canals of Müller occupy a median line and are supported on the sides by the canals of Wolff. 2. During the joining of the canals of Müller. 3. During the separation of the canals of Müller and the Wolffian ducts.

Vautrin states that when the epithelium covering the cyst is polymorphous in appearance, cylindrical in certain areas and flat-celled in others, the cyst undoubtedly may have originated in the ducts of Müller. Cysts that have originated in the Wolffian ducts are covered entirely with cylindrical epithelium.

In certain exceptional cases this origin may be recognized by a close study of the decidua in normal or ectopic pregnancy. In a case of ectopic pregnancy reported by Ferroni numerous decidual elements were found at the center of an adenomyoma, collected beneath a cavity formed by cylindrical epithelium which had its origin in the Müllerian ducts.

Vautrin asks further if very often at the center of adenofibroma there do not exist rests of Müllerian epithelium from which, by encystment, conjunctive reaction of fibroma may occur. L. CHEVRIER.

Kalledey: The Etiology and Organo-Therapy of Uterine Hæmorrhages (Zur Lehre von der Ätiologie und Organotherapie der Uterusblutungen). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kalledey treated twenty-one cases of dysmenorrhœa by the administration of ovarian extract, and observed the immediate cure not only of the local, but also of the nervous, symptoms. Five of the twenty-one patients became pregnant during the treatment. This fact leads the author to conclude that, with the regulation of the internal secretion, the condition that favors conception also is influenced favorably.

On the basis of his results the author believes that the cause of dysmenorrhœa is hypofunction of the ovary. Forty-one cases of menorrhagia and metrorrhagia he treated successfully with hypophyseal extract. In five cases of hæmorrhage he effected a cure by the use of corpus luteum extract. One of these patients had been previously treated unsuccessfully by all other known means.

In Kalledey's opinion his results confirm the theory that uterine hæmorrhages are due to correlative disturbances in the organs of internal secretion. He leaves open the question as to whether the results were produced directly by the hormones used or by the hormones produced through the stimulation afforded by the injected material.

Kaiser: An Obstinate Metrorrhagia (Een hardnekkig geval van Metrorrhagie). *Nederl. tijdschr. v. geneesk.*, 1913, No. 18, 1227. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author used 20 cc. of horse serum subcutaneously and tamponed the uterus with a solution of gelatine with immediate and perfect success in a case of uncontrollable menstrual metrorrhagia. The subcutaneous injection of 20 cc. horse serum in another case of uncontrollable hæmorrhage from the uterus also was followed by an immediate and perfect cure. Symptoms of anaphylaxis were slight.

STRATZ.

Lawrence: Double Uterus and Vagina. *Southern M. J.*, 1913, vi, 477. By Surg., Gynec. & Obst.

The author reports the case of a married woman, forty-eight years old, who had never been pregnant. He was consulted owing to irregular bleeding. An examination showed a vaginal septum and two cervixes.

In opening the abdomen the first appearance of the uterine fundus was that of a bicornate uterus. The left tube was not attached to the broad ligament, but lay free in the abdominal cavity. The left ovary occupied a pocket in the broad ligament adherent to the uterine body. The right tube and ovary were normal. Two vaginal canals were demonstrated.

This was a case of uterus bilocularis. Several small myomata were found in the uterine wall.

C. H. DAVIS.

Murphy, J. B.: Procidentia Uteri: Murphy's Method of Fixing the Uterus. *Surgical Clinics of John B. Murphy*, 1912, ii, No. 3.

By Surg., Gynec. & Obst.

The patient was 56 years of age and the trouble was of 33 years' standing. With the woman in the Trendelenburg position, a transverse semilunar incision 6 in. long was made 1 in. above the symphysis. The tissues were divided down to the aponeuroses of the recti. The latter were then freed from fat over an area 1 in. wide and as long as the incision, and their edges retracted. The right rectus was then incised for 2 in., close to the median line and parallel to its long axis. This incision was extended through the peritoneum. The fundus, grasped by a vulsella, was brought out through the opening until the cervicocorporeal portion was clearly in view. The round and broad ligaments were then clamped with hæmostats on either side down to the cervicocorporeal junction and cut free from the uterus down to the tip of the forceps. The stumps were ligated, and the tips sewed accurately to the cervicocorporeal junction. This portion was then slipped back into the abdomen. Thus the body of the uterus was left bare and free above the level of the divided recti.

The peritoneum was next sutured accurately around and to the circumference of the cervicocorporeal portion of the uterus. In this way the peritoneal cavity was closed. The uterus was then split through the middle from before back, parallel to the long axis of the body, down to the cervicocorporeal junction. It was opened laterally to form two wings. The mucosa was next cut off, clear out through the divided cornua down to the cervix, and removed. The two lateral flanges of uterine muscularis were then sewed firmly to the aponeurosis of the rectus all the way around, making a bat-like flange over the recti. Finally, the divided edge of the aponeurosis of the rectus was tightly closed about the cervicocorporeal portion. The skin and fatty tissues were united and a small drain left in at the lower angle of the wound.

When this method is used the uterus can never get back into the abdomen. The traction on the anterior vaginal wall holds the bladder in position; that on the posterior vaginal wall holds the rectum. The only intra-abdominal work is the detaching of the broad ligaments. The stumps of these are covered by suturing; therefore no abraded surface is left within the peritoneum at the completion of the operation. If the operation is performed before the menopause, great care should be taken to remove all of the uterine mucosa; otherwise periodic hæmatoma will form at the menstrual periods. The operation can be performed in 20 minutes. L. J. MITCHELL.

Kuhn: A New Procedure for the Relief of the Retroverted Uterus. *J. Okla. St. M. Ass.*, 1913, vi, 79.

By Surg., Gynec. & Obst.

In this article the author gives his ideas as to the cause of symptoms and his operative treatment for the simple retroverted uterus. He states that many

women have a retroversion and have no symptoms at all, but that those suffering from this condition suffer through a ptosis of the abdominal and pelvic viscera, causing an engorgement and finally a varicosity of the pampiniform plexuses and incarceration of one or both ovaries within the folds of the rolled broad ligaments. A previous inflammatory pelvic condition or a relaxed perineum will also cause varicosities of the broad ligaments.

Treatment. The pampiniform plexuses are both ligated. The outer ends at the pelvic border are first tied in front, leaving the ligatures long; then the uterine ends are tied in the same way, the static blood being then expressed through an incision. This leaves the infundibulo-pelvic ligaments relaxed, so they are plicated through an opening made in the anterior border of the broad ligament. The peritoneum is then closed over this plication by a pursing suture. A ventro-suspension is now done with a long loop of cat-gut in order to temporarily relieve tension on the tender ligaments. The round ligaments are not disturbed.

EUGENE CARY.

Davis, C. G.: A Review of the Literature and Case Reports of Ruptured Uterus. *Surg., Gynec. & Obst.*, 1913, xvii, 51.

By Surg., Gynec. & Obst.

Most ruptures of the uterus are probably incomplete at first, and are not recognized until after the rupture of the peritoneum. In order to make a fair comparison of complete and incomplete rupture, and especially of the methods of treating them, the statistics of both should be considered together. Following these statements Davis discusses rupture of the uterus in regard to its etiology and frequency. As to the extent to which rupture involves the uterus, the author found in his study of the cases collected by Trask, that during pregnancy 68 per cent involved the body or fundus and 32 per cent the cervix; during labor, 8.5 per cent involved the fundus, 36 per cent the body of the uterus, and 55.5 per cent the cervix; in a total of 374 cases in which the site was mentioned, 53 per cent involved the cervix, and 46.2 per cent the body and fundus.

The probability that rupture will follow the modern Cæsarean section is not great, and in most cases should not be used as an argument in favor of sterilizing or performing the Porro operation. Section cases should be carefully watched during the latter months of subsequent pregnancies, and when there is pelvic deformity, overdilatation of the uterus, or some question as to the integrity of the old scar area, Cæsarean section should be performed several days before the expected onset of labor. Under no condition should the patient undergo the strain of the second stage of labor.

Treatment by tamponade and binder is a good temporary measure and may give good results in the incomplete cases where there is little hæmorrhage, but in all classes of cases statistics indicate that operative treatment gives better results than conservative treatment.

Werboff, J.: The Uterus of Woman; Its Normal Function and Its Rupture Incident to Labor (Die Gebärmutter des Weibes, ihre normale Arbeit und ihre Zerreibungen während der Geburt). Berlin: Karger, 1913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author lays down the general principles of the law governing the physiology of hollow organs of the body, namely the law of "peristaltic movement" depending on the alternating action of the longitudinal and circular muscular coats of these organs. He pronounces our views in regard to the physiology of the uterus during pregnancy and during the puerperal state as well as the pathological relations governing a rupture of the uterus erroneous.

Werboff criticizes the theory of Bandl, that a thinning out of the lower uterine segment is the cause of rupture, and places the fault in the friability of the tissue as a result either of difficult previous births or else as an acute developing condition in the first pregnancy. Coincident with this friability, there is a functional weakness of the uterine musculature, the clinical picture of a rupture varying according to either one or both of these pathological conditions. According to the author, there can be no prophylaxis, as the symptoms heretofore called "threatened rupture" are in reality due to a "beginning rupture." A detailed contradiction to the anatomic basis of the Bandl theory is offered, the author applying his own law of peristaltic movement to all of the uterine functions incident to labor and the puerperium, and to the changes in form resulting therefrom. He differentiates the action of the longitudinal muscular layer from that of the circular, the former producing complete effacement and dilatation of the cervix, and the latter, aided by the thoracic-abdominal pressure, serving to expel the child.

In the antagonistic action of the abdominal muscles and diaphragm the upper fixed point of support for the contracting uterus is really to be found within the lungs. The contractions and expansions of the lungs and the changes in form incident thereto are the origin of the voluntary pressure pains, i.e., the contractions of the supporting muscles of the thoracic and abdominal cavities. Special significance is attached to the anterior abdominal muscles as being the anterior fixed points for the uterus to work against. During an insufficiency of these muscles the woman in labor endeavors to overcome the disturbance of the pressure pains resulting therefrom by assuming various positions most favorable to her.

The author recommends, as a practical aid in cases where an insufficiency exists, that a suitable binder be applied during the expulsion period by the woman herself and in a manner most effective to her. In severe diastasis of the recti with the so-called "Hängeleib," the correction of the position or stretching of the contracted anterior wall of the uterus would be too painful, and therefore the application of the binder is contra-indicated. The author

has employed the binder in 123 cases, with very favorable results. The monograph closes with a complete contradiction of the Bandl theory as to effacement of the lower uterine segment even though in many points a definite proof of his contention is still lacking. The article contains plates of Bandl's own work, and autopsy protocols of the author's four cases of ruptured uterus.

VASSNER.

ADNEXAL AND PERIUTERINE CONDITIONS

Cohn, F.: The Clinical Significance of Rupture of the Follicle in the Ovary (Die klinische Bedeutung der Follikelsprungstellen im Ovarium). *Arch. f. Gynäk.*, 1913, xcix, 505.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In the rupture of a graafian follicle, the peritoneal cavity communicates with the inner part of the ovary for a time at the site of the rupture. The layer of lutein cells which form over the site of rupture is very thin and is often further thinned out by the accumulation of fluid in the space. This new cyst also may rupture and hæmorrhage may follow. Bacteria from the abdominal cavity may enter into the ovary at this site.

Hæmorrhage from a follicle has its origin either in a torn vessel or in deeper-lying ovarian tissue. Schauta has observed a follicular hæmorrhage of several liters of blood. Hæmorrhage into the free peritoneal cavity from a corpus luteum occurs nearly as often. Bürger described such a case where more than two liters of blood were lost. Cohn adds six cases of his own to those already published. In five instances the severe hæmorrhage came from a fully developed, and in one instance, from a retrogressive, corpus luteum. In two cases ruptured tubal pregnancy was suspected; in the other four cases it was found incidentally. The hæmorrhage in two cases was due to pressure on the matured follicle during an internal examination. Hæmorrhages of this kind may be controlled with mattress sutures or by excising the part. Large follicular hæmorrhages can always be recognized at operation; smaller intraperitoneal hæmatocèles may be present without symptoms, and are found only incidentally. The hæmorrhages may be followed by adhesions between the adnexa and the peritoneum.

That bacteria migrate into the follicles has also been demonstrated. The frequently occurring corpus luteum abscesses are due usually to gonococci or tubercle bacilli, and but rarely to streptococci, staphylococci or pneumococci. In a case recorded by Orthmann the fimbriated extremity of the tuberculous tube extended directly into the corpus luteum abscess. Frys found an ascaris in an abscess of this kind.

Fraenkel, Orthmann and Menge state that tubal diseases in particular are apt to cause an infection of the follicle and corpus luteum. The bacillus coli and anærobic organisms play a minor rôle. The ruptured follicle and corpus luteum may be penetrated also by cellular elements, such as carcinoma cells.

VON MILTNER.

Von Franqué: Cure of an Ovarian Cancer with Metastases by Operation and Subsequent X-Ray Treatment (Heilung eines Ovarialcarcinoms mit Metastasenbildung durch Operation mit nachfolgender Röntgenbestrahlung). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In a patient, 16 years old, an ovarian cancer the size of a head, which penetrated deeply into the broad ligament, was removed on April 12, 1912. A retroperitoneal metastasis the size of a fist and numerous lymph gland metastases had to be left behind. The after-treatment consisted of X-raying with five erythema doses during three months, with the result that the palpable metastases disappeared. The patient has remained free from any recurrence for one year and must be considered completely cured. On microscopical examination the tumor showed the characteristics of severe malignancy; well-marked mitosis, polynuclear cells, syncytial formations and sarcomatous degeneration of the stroma.

Steinharter: Endothelioma of the Ovary, with Report of a Case of Mesothelioma of the Ovary. *Lancet-Clin.*, 1913, cx, 84.

By Surg., Gynec. & Obst.

The author discusses the classification of this condition, calling attention to the difficulty and confusion in the classification and nomenclature of similar tumors of the ovary. He believes that in no case reported has it been proven that the tumor had its origin from the endothelium of blood vessels. As all the tissues of the ovary are evidently of mesenchymal origin, he would classify these tumors as mesotheliomata unless a definite relation to the vascular endothelium can be established.

The author reports a case, giving a brief history, the autopsy findings, microscopical description, and four excellent microphotographs. C. H. DAVIS.

Seeligmann, L.: A Successful and Combined Method of Biochemic and X-Ray Treatment of Malignant Tumors; the Cure of a Recurrent Ovarian Sarcoma with Metastasis in the Spinal Column (Über eine erfolgreiche, kombinierte Methode der Chemo- und Röntgentherapie maligner Tumoren; ein schweres Rezidiv eines Ovarial-Sarkoms mit Metastase in der Wirbelsäule geheilt). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The use of the X-ray combined with mesothorium emanations is only a local treatment which is confined to the upper layers of the new growth. It does not act upon the more deeply situated parts of the cancer and the metastases. If the present views as to the cause of cancer are considered, a combined treatment, constitutional as well as local, must be instituted. By such treatment it is possible to so weaken the vitality of the advancing epithelial cells in the tissues that they will succumb to the destructive action of the X-rays.

Also on the basis of the other theory, which is advocated by Czerny, i. e., that a parasite is the

etiological factor of cancer, the combined treatment is the best. It is possible that the parasite might be killed by the intravenous injection of arsacetin just as the spirocheta pallida is overcome by salvarsan. After the destruction of the parasite or its toxins, the neoplasm can be resorbed by the X-ray.

The author has used the combined method successfully in a case of pronounced recurrence of an ovarian sarcoma with metastases in the spinal column. The tumor disappeared entirely and the metastases in the spinal column were completely cured. The bad effects attributed to the use of arsacetin can be avoided by using it in small doses and testing the sense of color every eight to ten days. Existing diseases of the eyes are a contra-indication to the use of the drug.

Öhman: Ovarian Hæmatoma and Ovarian Hæmorrhage (Ovarioverenvuodoista ja ovariohematomeista). *Duodecim*, 1913, xxix, 55.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Six cases of ovarian hæmorrhages are reported. The cases were treated during the last year and discovered during the course of the operation. In two cases the operation was performed for suspected extra-uterine pregnancy; in one the ovarian hæmorrhage was found associated with uterine myoma; in another case an ovarian tumor was diagnosed; in the fifth the diagnosis was uncertain and an exploratory laparotomy was performed; and in the sixth case a chronic appendicitis was diagnosed. Five of the operations were performed by the author. All the six patients recovered. Five times a hæmatoma had formed and in one case the hæmorrhage was just beginning and was most profuse in the region of the follicles. Each case was examined microscopically. Corpus luteum hæmatomata were found three times. In two cases a large hæmatoma had formed in the middle of the ovarian stroma. Inflammatory processes were not present within the ovaries but an acute pyosalpinx was found in one case and a chronic pyosalpinx in another. In the other four cases both tubes were perfectly healthy.

Ovarian hæmorrhages may be classified as follows: 1. Diffuse hæmorrhages confined mostly to a follicle and its immediate surroundings without the formation of a hæmatoma. 2. Hæmatoma formation in the ovarian stroma. 3. Corpus luteum hæmatoma with distinctly demonstrable lutein cells.

Surgical treatment is the best, as conservative treatment is protracted and hard on the patient. During appendectomies, especially if the appendix appears healthy, attention should be given to the ovaries to discover hæmorrhages or hæmatomata. Causative etiological factors could not be found in these cases. BJÖRKENHEIM.

Stetten: A Method of Ventrofixation Combined with Certain Tubal Sterilization by Means of Extra-Abdominal Displacement. *Surg., Gynec. & Obst.*, 1913, xvii, 120. By Surg., Gynec. & Obst.

The author describes a method of ventrofixation combined with certain tubal sterilization. He

points out the uncertainty and complexity of the various plans suggested for tubal sterilization and emphasizes the fact that the prevention of a future pregnancy without castration is frequently indicated in the more advanced prolapse of younger women. For such cases he recommends the combined operation, the essential features of which are as follows: Through a median laparotomy the round ligaments are ligated about two inches from the uterus, divided proximal to the ligatures, and freed from the broad ligaments to the uterine cornua by a few snips of the scissors. The peritoneal edges of the incisions in the broad ligaments are sutured. Ligatures are then passed between the tubes and the ovaries and the tubes are freed to the uterine attachments. The freed round ligaments and tubes are then brought through a stab-wound of the fascia, muscle, and peritoneum. They are drawn taut and fixed with a suture to the fascia. A stitch through the scarified fundus of the uterus is included in the peritoneal suture. The muscle and fascia are closed in the usual manner.

For more absolute fixation one or two of the fascial sutures may be passed through the uterus, the peritoneum having been left open. The excess of tubes and round ligaments is removed. The tubes are ligated and the stumps cauterized. The tubes and ligaments should be left long enough to overlap in the median line. They are then stitched to the fascia and to the structures of the opposite side. The skin is closed. The round ligament fixation part of the operation is practically the method advocated by McKay. The drawing of the tubes through the stab-wound has the double object of reinforcing the fixation and producing a certain sterility.

The author finally suggests that this lodgment of the distal ends of the tubes outside of the abdominal cavity might be used for the purpose of producing temporary sterility.

Blumberg: A New Operation for the Sterilization of Woman with a Future Possibility of Restoring the Function (Neue Operation zur Sterilisierung des Weibes mit Möglichkeit der späteren Wiederherstellung der Fruchtbarkeit). *Berl. klin. Wchnschr.*, 1913, I, 729.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

For the purpose of sterilization each ovary should be put into a pouch or pocket made of peritoneum between the broad ligament and the posterior surface of the uterus, so that no ovum can enter the tubes which remain untouched. The free edge of the broad ligament is folded onto the posterior surface of the uterus, and the ovary placed into this pocket. The free edge is then sutured carefully to the uterus so that it becomes impossible for an ovum to escape. It is usually advisable in making the pocket to anchor the ovary with a temporary retention suture of catgut through the lig. ovarii; also to reinforce the suture line by painting it with tincture of iodine so that no loopholes remain.

The restoration of function could be accomplished very easily by a later opening of the pocket with liberation of the ovary. The author has performed the operation vaginally in six cases during the past two years, with complete success as far as sterilization is concerned. He has not had occasion to restore the function.

BUTZENGEIGER.

Funk-Brentano and Plauchu: The Treatment of Sterility in Woman (Trattamento della sterilità nella donna). *Riv. internaz. di clin. e terap.*, 1913, viii, 81.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The chief cause of sterility in the female is gonorrhoea. Primary sterility on account of disease or general conditions is difficult to investigate. Sterility due to congenital or acquired malformations of the vulva is cured by incisions or other operative procedures. Changes in the development of the uterus have but little influence if the development of the ovum is normal. Infantilism is curable by electricity, massage, and dilatation. Stenoses of the cervical canal of whatever origin, accompanied by marked flexion of the uterus, must be dilated repeatedly, and for a long period of time. The large number of operations devised for this trouble have resulted usually in failure. Malpositions are important causes of sterility, and if correction is not obtained by means of manual replacement or pessary, an intra-abdominal shortening of the round ligament is advised.

Tumors of the uterus, such as myomata, are unfavorable. The author favors removing them by enucleation. Malformations of the adnexæ are much less important than gonorrhoeal changes; therefore surgical treatment is frequently indicated, and conservatism is necessary. As secondary sterility, the author considers those cases that have been pregnant once. Thirty per cent of all sterility cases are of this kind and are usually the result of gonorrhoea. More rarely they result from puerperal infection.

BERBERICH.

Hertzler, A. E.: "Pericolic Membrane" of the Broad Ligament. *Surg., Gynec. & Obst.*, 1913, xvii, 60.

By Surg., Gynec. & Obst.

From both clinical and experimental evidence the author concludes that surgeons have taken too narrow a view of the so-called pericolic membrane. In the broad ligament over a varicose pampiniform plexus may be found an entirely similar structure consisting of a network of subperitoneal vessels, arranged prevalingly parallel from below upward and connected by fine vessels with the plexus beneath. These vessels become empty when the dilated plexus is tied off and removed. In a case re-operated a year after a pampiniform resection, a similar membrane, well marked at the first operation, was found to have wholly disappeared. An analogous formation occurs in the deep layers of the skin of the scrotum in varicocele, when vessels normally invisible have become as large as goose quills.

The author has produced membranes of this kind experimentally. By careful injections of silver nitrate solution the transparent spaces in the mesentery of laboratory animals can be shown to contain minute bloodless channels which dilate and fill with blood in response to stasis or irritation. If a bit of sterile gauze be thrust beneath the peritoneum a typical "pericolic membrane" develops. The pericolic membrane is thus of circulatory origin and is a special case of what the author has called "varicosity of the peritoneum." It is not a developmental anomaly, although it may affect an abnormal peritoneal fold. It does not follow severe crises, but is always due to slight, long-continued disturbances. It is to be distinguished rigidly from pseudo-peritoneal membranes, which result from exudative processes.

Wolff: Rare Distribution of Resorbed Dermoid

Contents (Seltene Verbreitungswege des resorbierten Dermoidinhalts). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In a case of right-sided ovarian dermoid with extensive resorption of fat into the wall of the cyst and into the broad ligament, there were also three cysts the size of a hazel-nut in the mesenterium of the appendix containing typical dermoid fat contents. The changes in the wall of the tumor were identical with the change occurring in the tumor walls in the cases of resorption of fat described by Schottländer, Krömer, Gentili and others. In the absence of any demonstrable rupture of the cyst wall it is assumed that the transportation of the fat occurred by way of the lymphatics.

EXTERNAL GENITALIA

Legueu: The Transperitoneal, Vesicular Route for the Cure of Certain Operative Vesico-Vaginal Fistulae (De la voie transpéritonéo-vésicale pour la cure de certaines fistules vésico-vaginales opératoires). *Arch. urol. clin. de Necker*, 1913, i, 1.

By Journal de Chirurgie.

The vesico-vaginal fistulae which sometimes follow hysterectomy when the bladder has been injured in the course of the operation are very difficult to treat from below by the usual vaginal route. On the other hand, the upper route is recommended in cases of this kind. The operation is then either transvesical or transperitoneal. Legueu has combined both of these methods in a new operation, transperitoneal-vesicular, which he describes as follows:

1. Median laparotomy is performed below the umbilicus, with opening of the peritoneum and protection of the operative field. Then the posterior bladder wall is opened exactly in the median line, the incision extending into the vagina. The cut edges are held up with forceps and drawn forward towards the pubes until the entire bladder is exposed to its base.

This gives easy access to the fistula which can then be seen through the incision in the bladder.

2. The vagina and bladder are then separated with the scissors until the two structures are as independent as they were before the fistula was formed. This separation of the two walls should be carried at least a centimeter beyond the edge of the fistula.

3. Careful suture of the bladder in two layers.

4. Separate suture of the vagina.

5. Peritonization of the injured surfaces. Legueu recommends slipping the peritoneum over the two structures in such a way as to interpose between them a veritable peritoneal cul-de-sac. He sees no danger in this interposition of peritoneum, but believes that it favors rapid healing, rendering the suture firmer.

6. Closure of the abdominal wall, leaving a drain in the peritoneal cul-de-sac.

Legueu used this method in the case of a patient who had had a hysterectomy 3½ months before, developing a fistula at the base of the vagina which could be easily seen by cystoscopy and which was situated between the two ureteral orifices. The patient lost urine constantly day and night, evacuation taking place both by the urethra and the vagina. Following the operation there was some abdominal reaction with tympanites but this ceased after a purgative on the third day. The vesical catheter was removed on the tenth day. At the time of leaving the hospital, the 25th day, the patient urinated every three hours only. There was a slight escape through the vagina, but it occurred at night only and in such small quantities that the author felt justified in concluding that his procedure had been successful.

MAURICE CHEVASSU.

Heymann, H., and Moos, S.: Experiences with the Vaccine Treatment of Gonorrhoea in the Female (Erfahrungen über Vaccinebehandlung der weiblichen Gonorrhoe). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 623.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Heymann and Moos employed arthigon in ninety-one cases for diagnostic purposes, and in fifty-nine cases for treatment. For diagnosis .5 ccm. given subcutaneously was not reliable. Of twenty-one uncomplicated cases of gonorrhoea, a local reaction was obtained thirteen times and a general reaction once; forty-five cases with complications (mostly adnexal disease) rendered a local reaction thirty-two times, and a focal reaction seven times; seventeen times a slight temperature rise occurred. In thirteen cases of fresh ascending infections no reaction was obtained.

Very decided positive reactions were obtained also in non-gonorrhoeal conditions: in one case of tuberculosis of the adnexa, in two cases of appendicitis with secondary adnexal disease, in one case of tubal abortion and in one case of ovarian cancer, all diagnoses being confirmed by operative findings.

In fifty-nine cases arthigon was employed exactly

according to Bruck's directions. Injurious results were never observed; a local reaction only rarely; focal reactions several times, but in most cases only on administration of larger doses; general reactions were obtained most frequently. Only fifteen cases remained without fever; all others had temperature rises from a few tenths of a degree to over forty degrees; the general condition remained uninfluenced. In contradiction of Bruck's claims, the temperature reaction is no criterion of the end result obtained.

The results observed in fresh open cases (urethral and cervix gonorrhœa) were absolutely negative in adults. Vulvo-vaginitis in children was not treated. Older adnexal disease was scarcely influenced, nine cases showing slight improvement and seven none. Better results, however, were obtained in acute ascending adnexal disease; absolute cure in 10 per cent of the cases, decided improvement in 27 per cent, slight improvement in 41 per cent and in 20 per cent none whatever. The subjective improvement in 23 patients was good, in 14 slight. There was no improvement in 16.

Most decided improvement occurred in joint complications: excellent in two cases, marked in three, and no improvement only once. In this class of cases the improvement was much more rapid than could be obtained by other methods. From these results it can be seen that the vaccine treatment offers no better results than the former conservative methods. The combination of both methods would probably give the best results. BISCHOFF.

MISCELLANEOUS

Weitzel: X-Ray Therapy (Röntgentiefen-Therapie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The technique for X-ray treatment is minutely described. The author rays through 8 different places, using a tube 7 to 9 Benoist-Walker, and a diameter of 7 cm., with 4 to 5 milliamperes per second, an aluminum filter of 3 mm., and a focal distance of 18 cm. Two séances of 4 exposures each on two succeeding days form one series. The dose is measured by the Kienböck method and amounts to 80 x per series. The rays are applied only through the anterior wall. Twenty out of twenty-one cases of myomata became amenorrhœic. In one case the myoma grew, necessitating its removal. The tumor was not malignant. Amenorrhœa was obtained in 2.1 months on an average. The age of the patient has no influence on the time. For a full course of treatment 500 to 600 x=7 series were required. It is continued until the menses have remained absent for 8 weeks. A decrease in the size of the tumor occurred in 15 cases, twice from the size of a man's head to that of a fist or goose egg. The symptoms disappeared in 5 cases, while the tumor remained unchanged. In 5 cases of metropathia hæmorrhagica, amenorrhœa resulted on an average in 1.4 months;

250 to 300 x=3 to 4 series were required for a complete cure. In half of all the cases, symptoms of climax appeared. Disturbances of the bladder or bowel were not observed.

If wrong diagnoses can be avoided, if patients with irregular hæmorrhages are subjected to a diagnostic curettage before the beginning of the X-ray treatment, and if the patients are continuously kept under careful supervision during the treatment, then a complete cure in a clinical sense may be obtained by the X-ray treatment in cases of myomata and hæmorrhagic metropathia without danger to the patient.

Füth: X-Ray Treatment in Gynecology (Röntgentherapie in der Gynäkologie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Füth describes the application of the X-rays as used by Graessner in the Cologne Academy and the complications which he observed in 41 cases treated by the rays. As such, he mentions frequent desire to urinate, nausea, vomiting and pigmentations of the skin. The results of treatment are as follows: In metropathia, 11 per cent were improved and 89 per cent cured; in myomata, 15 per cent unimproved, 5 per cent improved and 80 per cent cured. Two cases each of myomata and metropathia began to bleed again, necessitating further rayings. Four cases of myomata treated by the rays were afterwards for various reasons treated surgically. In metropathia a curettage should precede the raying to avoid a hæmorrhage at the first menstrual period following the commencement of the treatment.

Nausea and vomiting are probably caused by the inhalation of the ozone produced during the treatment. It is intended to decompose the gas by catalytic methods before it is inhaled.

Runge: X-Ray Treatment in Gynecology (Röntgentherapie in der Gynäkologie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Of 29 cases of metropathia, 25, or 86 per cent, became amenorrhœic and 4 were subsequently operated. Of 90 cases of myomata, 86, or 95 per cent, became amenorrhœic and 4 were operated. The cause of the negative result could not be determined but was probably due to a submucous location of the tumors. A decrease in the size of the tumors was noticed in about 40 per cent of the cases in which amenorrhœa was produced. The result in 10 cases of pruritus vulvæ were very good and in 7 cases of dysmenorrhœa doubtful, about 43 per cent of the latter being cured. The raying of two cases of adnexal inflammations resulted at first in profuse menstrual bleedings but finally in amenorrhœa.

The symptoms of change of life are not any more severe than those of the normal physiological climax. The author finally reports the immediate accessory symptoms produced by the raying and describes the technique. On an average, 3 to 4 series are neces-

sary in metropathia, and 5 to 6 in myomata, for the production of an amenorrhœa.

Heimann: X-Ray Treatment (Röntgentherapie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This is a report of gynecological X-ray treatment at the Breslau clinic. Myomata, uterine hæmorrhages and inoperable, as well as postoperative, cases of cancers were treated. The time elapsed since the raying of the latter is too short to permit the issuing of a report. Forty cases of myomata and metropathia hæmorrhagica have been treated, and with the exception of one case, all were cured. In the great majority of the cases an amenorrhœa was produced, and in a few cases only an oligomenorrhœa. In the unimproved case, a suspicion of malignancy arose during the treatment and the latter was stopped on that account. Finally a description of the technique is given.

Fellner, O. O.: Experimental Contributions to the Physiology of the Female Genitalia (Experimentelle Beiträge zur Physiologie der weiblichen Genitalorgane). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Fellner injected a large number of sexually immature rabbits and guinea pigs with alcoholic ethereal extracts of placenta, ovary and uterus. The injections, which were in part subcutaneous and in part intraperitoneal, were carried out over a long period of time.

Laparotomy and sections showed that a marked hypertrophy of the uterus resulted. The muscular layer was hypertrophied, the mucosa decidedly thicker and higher; the epithelium, normally flat, grew higher and cylindrical, and became dotted with vertical nuclei. The vagina became larger and wider, the epithelium assumed the characteristics of the epithelium in pregnancy. The mammary gland enlarged to four or five times its normal size.

Very similar results were obtained also with the male animals. The suprarenals were greatly hypertrophied; the kidneys showed a parenchymatous nephritis with much albumen excretion. Even when placental extract from the same species was used, similar but much less marked findings occurred. The same results were obtained with preliminary castration before injection.

The substance used is soluble in salt solution, 70 per cent alcohol and ether. It is thermostable and therefore can be sterilized completely. Similar results were obtained with extracts of the amniotic membranes. Much weaker in effect were the results following injections of alcohol-ether extracts of corpus luteum taken from the ovaries of non-pregnant cows. The same effect was obtained with alcohol-ether extracts of ovaries of pregnant cows, whereas similar extracts of the uterus of pregnant animals gave only slight reaction, and those of the uterus

of non-pregnant animals and of ovaries not containing a corpus luteum of non-pregnant animals gave none at all. Extracts of testicles produced the same results as the extracts of the ovaries, whereas brain extract produced none at all. If cholesterin and cholesterin esters are removed from the extract the effect of the extract is not altered. As to whether we are dealing with an internal secretion of the placenta, the author is unable to decide at the present time.

Newman: Cases Illustrating Certain Urinary Conditions in Women Associated with Frequent or Painful Micturition. *Clin. J.*, 1913, xlii, 193. By Surg., Gynec. & Obst.

Newman gives a very interesting discussion of the most important urinary disturbances in women.

Cystitis of pregnancy, with its results. This form of inflammation of the bladder is often overlooked at its onset as the symptoms are attributed by the patient to "her condition." Another danger arises from the early disappearance of acute symptoms in many cases, and care is not taken to free the bladder from infective organisms. These patients suffer from inflammation of the bladder and the neck of the urethra. The author irrigates with boric acid solution twice daily, and after a week has swabbed the urethra with pure phenol, and afterward with an alkali to stop the action of the acid. Cocaine bougies are introduced to relieve pain.

Early renal tuberculosis is often not accompanied by pain; frequent micturition or nocturnal incontinence are the only symptoms. Vesical irritability, and, after a time, pain, also become features. When the kidney is normal, the orifice of the ureter is also normal, and when one ureteral orifice is normal while the other is altered, the renal lesion is on the side of the morbid ureter.

In early tuberculosis of the bladder the most characteristic changes are hyperæmia of the floor and neck of the bladder, associated with minute nodules beneath the epithelium of the mucous membrane of the bladder. The author reports a case in which he curetted the caseous deposit on the floor of the bladder through the urethra. The patient was also treated with tuberculin R.

Lesions at the neck of the bladder, the trigone, and the urethra cause frequency of urination and often incontinence. He reports a case in which he twice applied his phenol treatment. In other cases his treatment consisted of irrigation with the permanganate and chlorate of potassium and the instillation of a weak silica solution. In a severe staphylococcus infection of the bladder he employed suprapubic drainage and irrigated with boracic acid and filtrate of saurine (lactic acid cultures).

Minute polypi in the urethra are rare, but may cause considerable irritation. They may be removed with curette or snare.

A case is reported in which a movable right kidney caused severe pain at the end of micturition. It was cured by nephrorrhaphy. C. H. DAVIS.

Bauereisen, A.: The Atria of Post-Operative Infection of the Female Urinary Tract (Über die Ausbreitungswege der postoperativen Infektion in den weiblichen harnorganen). *Ztschr. f. gynäk. Urol.*, Leipz., 1913, iv, 1.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After thorough microscopical investigations the author comes to the following conclusions: The chief source of infection for the urinary bladder is the urethra, from which organisms reach the bladder either as a result of catheterization or of spontaneous ascending infection. These lead to an inflammation of lesions produced during the operation. The migration of organisms from the outside of the bladder through the bladder wall occurs only rarely, and then only in severe infections of the surrounding tissue. When it does occur, however, the organisms are rapidly walled off by infiltration and granulations as well as by the lymph stream which runs in the opposite direction. The same conditions hold in cases of infection of the ureters. The kidneys are infected either from a hæmatogenous source or through the spontaneous ascension of organisms from the bladder.

The principal kinds of bacteria involved are the staphylococci, streptococci, and the colon bacillus, the latter usually in combination with pyogenic cocci. Avoidance of catheterization is advised wherever possible. The preferred therapy is the prophylactic injection of boroglycerin and pituitary extract. In those cases in which the catheter is indispensable, irrigation with collargol should be resorted to as soon as a cystitis begins to develop.
HAGEN.

Mayer, A.: The Use of Serum in Obstetrics and Gynecology (Über die Serumanwendung in der Geburtshilfe und Gynækologie). *Med. Cor.-Bl. d. württemb. ärztl. Landesver.*, 1913, xviii, 261.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

By means of a series of successfully treated cases of dermatitis, herpes, urticaria, etc., the author proves the correctness of his proposal to treat the toxæmias of pregnancy with the blood serum of healthy pregnant women. If the result is negative there must be an accidental dermatitis present or the serum injected is not normal. In the latter case serum from another pregnant woman must be employed. Hyperæmesis gravidarum, nephritis of pregnancy, icterus and eclampsia are favorably influenced, the latter especially by epidural injections. Eclampsia is rare in Württemberg, but in the few cases treated the results were so striking and rapid that they offered considerable encouragement for further investigations. The same is true of eclampsia neonatorum.

The author examined the serum of puerperal women who, in spite of the fact that they had hæmolytic streptococci in their blood, remained perfectly well throughout the entire course. He describes the three following cases: 1. Severe general sepsis. After two injections decided improvement was

noted. The associated peritonitis, however, could not be checked. 2. Sepsis with diarrhœa. The patient had received two injections of serum from a convalescing puerperal sepsis case when improvement set in. 3. Collæmia with diarrhœa and exanthem. This patient was given serum from a patient who had a bacillus coli pyelitis. Improvement occurred also in this case. In all of the cases immediate improvement occurred in the general condition of the patients, with decrease in temperature and pulse, cessation of diarrhœa, etc. In pyæmia the serum apparently is not of much value, as it cannot attack the organisms within the thrombi. Pregnancy serum was tried also in severe anæmia, chlorosis, and especially in anæmia due to bleeding fibroids; in the latter cases it tided the patients over until operation could be performed. LAUBENBURG.

Mayer, A.: The Significance of Infantilism in Obstetrics and Gynecology (Die Bedeutung des Infantilismus in Geburtshilfe und Gynækologie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In infantilism the first menstrual period is often delayed. The women are often and wrongly thought to be genitally diseased and are treated gynecologically without benefit. Menstruation is frequently associated with dysmenorrhœa so that the working capacity is disturbed. In marriage, lessened sexual desire and dyspareunia lead to a true martyrdom and the marriage often remains childless. If conception results abortion frequently follows. The disturbances of pregnancy are often increased, all possible but harmless abnormalities being treated for this in vain. During labor, weak pains, rigidity of the cervix, decreased relaxability of the soft parts, narrow pelvis, etc., indicate mechanical hindrance, laceration of the soft parts, and infection.

Resistance to infection is lessened on account of the hypoplastic condition of the circulatory system. For the same reason anæsthetics are especially dangerous in such cases. The ability to nurse is usually defective. The poorly developed perineum has a predisposition to prolapsus, but the retroflexio uteri which is frequently observed is not the cause of the patient's numerous complaints. Treatment for it is unnecessary and often disadvantageous. A tortuous tube predisposes to extrauterine pregnancy. A deep cul-de-sac may cause diagnostic difficulties in intra- or extraperitoneal rupture of tumors.

When infantile stigmata are associated with inflammatory adnexal disease of doubtful origin tuberculosis may possibly be the etiological factor; when associated with ovarian tumors we may suspect embryomata, and when tumors are present in the pelvis, a displacement of the kidney into the pelvis should be thought of. Infantile women are congenital invalids, often simulating gynecological disturbance without being genitally diseased.

SCHMITZ.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Markoe and Wing: The Thyroid in Pregnancy.

Bull. Lying-In Hosp., N. Y., 1913, ix, 96.

By Surg., Gynec. & Obst.

After examining 601 cases the authors conclude that the relation of the thyroid to the physiology and pathology of pregnancy shows a diversity in its clinical manifestations which is puzzling and difficult to analyze. The symptoms of hyperthyroidism developing during pregnancy usually show a decided diminution after confinement, and with succeeding pregnancies the symptoms are not so severe. The management of pregnant cases showing thyroid enlargement, with or without hyperthyroidism, is directed toward:

1. Open air treatment and the improvement of the hygienic surroundings.
2. Avoidance of nervous strain and worry.
3. Maximum of sleep and rest.
4. Simple diet and regulation of the bowels.
5. Tonic medication.
6. In some cases administration of the syrup of hydriodic acid.

In cases in which the symptoms are severe, the authors advise absolute rest in bed.

ROBERT T. GILLMORE.

Landsberg: The Significance of the Ductless Glands for Metabolism During Pregnancy

(Die Bedeutung der innersekretorischen Drüsen für den Stoffwechsel in der Schwangerschaft). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The ovaries and thyroid gland were extirpated in pregnant bitches and the metabolism of hunger was studied before and after the operations. It was found that in comparison to normal conditions a slight increase in the protein metabolism occurred during pregnancy after oöphorectomy. A decrease in the nitrogen excretion was observed after the injection of an extract of the true corpus luteum. The decrease in the nitrogen excretion was not so marked after thyroidectomy in the pregnant compared with the non-pregnant. The hyperplasia of the thyroid in pregnancy should not be construed as causing a hyperfunction in metabolism. This also explains the retarded metabolism after oöphorectomy. The thyroid gland was removed in two cases in which pregnancy continued to exist for some time after oöphorectomy. A surprising decrease of the thyroid gland after a preceding oöphorectomy was found. Marked differences were also seen on microscopical examination. Metabolism was more decreased than after thyroidectomy.

Examinations of the phosphorus and calcium excretions were undertaken but the results obtained so far do not permit us to draw a conclusion. Further investigations will be made. The investigations made so far permit the statement that the function of the ductless glands during pregnancy shows important differences from that during the non-pregnant condition.

Horsley, J. S.: Abdominal Pregnancy with Living Child.

Surg., Gynec. & Obst., 1913, xvii, 58.

By Surg., Gynec. & Obst.

Horsley reviews the literature on abdominal pregnancy with living child, and records, with his own case, one hundred and five others. There are six instances in which the mother recovered and the child and the mother were living and in good health a year after the operation. In his own case, which was one of these six, the pregnancy was apparently at full term. The woman had been in labor for some time and was exhausted. Her pulse was 140. The child and placenta were enveloped in a thin membrane which derived its nutrition from the left broad ligament. The uterus was about twice its normal size. The child was delivered and the thin sac and the placenta were removed. The patient and child made a satisfactory recovery and both were living and well more than a year after the operation.

Schewachoff, S. W.: Cardiac Changes During Pregnancy

(Zur Frage der Veränderung des Herzens während der Schwangerschaft). *Arb. a. d. geburtsh. -gynäk. Klin. Prof. Redlich*, St. Petersburg, 1913, i, 3.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author examined the size of the heart in puerperæ on different days (1-10 apart) by means of Röntgen rays and also by means of teleröntgenography (focal distance 2 m.). He used a Bauer tube. In order to bring the anticathode against the middle of the heart each time, employing the same central rays each time, a special attachment was constructed. Exposures were made during the middle phase of respiration and when the stomach was empty. The patient was placed horizontally in bed. The time of exposure was not less than two seconds in order that the exposure might be made during the diastole. The measuring technique is described in detail.

From the data in the table that accompanies the original article it is evident that the size of the heart, and the influence of age, size, weight and number of births were different in all of the ten cases examined. In nine cases the heart did not de-

crease in size during the puerperium. In one case in which there was vitium cordis a decrease of the cardiac area up to 1 cm. occurred. From his observations the author concludes that the normal heart does not become enlarged during pregnancy, and is not dilated. As to whether there is a minimal hypertrophy, the microscope alone can tell.

BRAUDE.

Walthard: The Relations of Cardiac Disease to Pregnancy, Labor, and Puerperium (Die Beziehungen der Erkrankungen des Herzens zu Schwangerschaft, Geburt und Wochenbett). *Deutsche Gesellschaft. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Considering the high degree of certainty with which an aortic aneurism is recognized by means of the orthodiagram, the author feels justified in discussing the relations of cardiac disease to pregnancy, labor and puerperium, especially aortitis luetica and its result,—aneurism of the aorta. Among the 35 cases of valvular defects which were observed in the past two years during pregnancy, labor and puerperium there were five which presented the picture of an aortic insufficiency. In three the ortodiagram revealed a broader aortic shadow; two of the latter showed a left-sided recurrent laryngeal paresis with hoarseness. Two of these patients gave a positive Wassermann. In two patients clinical findings of aortic insufficiency were present. In the third case the luetic change involved principally the arch and descending aorta (autopsy report) and the aorta was dilated to a saccular aneurism. The clinical findings elicited by percussion and auscultation were, however, much less marked.

The course of the pregnancy and labor was different in the three cases. In the case in which the aortic shadow was narrowest and in which no pressure symptoms or nerve irritation existed, no cardiac disturbances set in during the entire pregnancy until a few hours before delivery. Dyspnoea made its appearance 15 hours before delivery, and for that reason the patient entered the hospital. Labor and the puerperium, however, went on without any serious disturbance of the circulation. In the second case, in which the widest aortic shadow was present, the patient during the eighth month commenced to complain of severe pains in the back and left side with dyspnoea and cyanosis. In the interest of the child, the patient was treated symptomatically to bring the interruption of pregnancy as near to term as possible. Suddenly rupture of the aneurism and death occurred. Immediate Cæsarean section, however, failed to revive the asphyxiated child. As soon as rupture occurred contractions of the uterus were perceived. In the third case with the medium-sized aortic shadow, pains in the chest, dyspnoea and hoarseness developed in the middle of the last month of pregnancy. As labor set in, dyspnoea, oppression in the chest, and cyanosis became aggravated and as the blood-pressure was about double the normal at the beginning of labor a Cæsarean section was performed under lumbar anæsthesia.

From the literature he concludes that in aneurism of the aorta in pregnancy, rupture of the aneurism usually occurs during the latter half of pregnancy or during labor. It is highly probable that the rise of blood-pressure incident to uterine contractions during pregnancy and labor is the cause of the rupture. The author's conclusions are the following: That a pregnancy in a patient with an aortic aneurism should be terminated by Cæsarean section under lumbar anæsthesia and that sterilization should be performed at the same time.

Gröné: Pregnancy and Labor in Organic Heart Disease (Om havandeskap och förlossning vid organiska hjärtfel). *Allm. Sven. Läkartid.*, Stockholm, 1913, x, 169.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author investigated the material of the hospital at Malmö. Fifty-four labors were observed in forty-two women who had cardiac disease, i. e., cardiac insufficiency. Two labors occurred in six women, three labors in one patient and five labors in another. Three died. Fifteen women had mitral insufficiency, 23 mitral stenosis plus mitral insufficiency, 2 aortic insufficiency, and 2 aortal and mitral insufficiencies. In 34 cases compensation was good, in 20 poor; of the latter 6 were near incompensation. The per cent of pregnancy occurring in women with cardiac disease was 1.1 per cent. In 87.5 per cent no disturbance of compensation occurred during pregnancy. Concerning the influence of heart disease, the author concludes that the importance generally ascribed to it as causing spontaneous abortions is largely overestimated. Labor was spontaneous in 31 cases and operative in 14 (forceps 11 times, manual extraction twice, Cæsarean section once). The uterus was emptied 9 times with forceps and dull spoons in abortions. Not once did a severe post-partum hæmorrhage occur.

Nursing should not necessarily be forbidden in these cases. In the literature the author found an average mortality of 1.2 per cent in pregnancies with heart disease. The mortality was 2.6 per cent in cases collected by him. It is not any more dangerous to go through labor with a well compensated valvular disease than under normal conditions. Women suffering from heart disease should be placed under the observation of a physician during the last half of pregnancy. The termination of labor should be left to nature. Interference should be resorted to only in cases where the expulsion is too protracted and the patient is put under great stress by the labor pains.

Profound ether narcosis seems not to be contra-indicated in uncompensated heart disease. Positive indications for the induction of premature labor can hardly be fixed; each case must be treated strictly individually. Premature labor was induced in only one case with a fatal result for mother and child. For the induction of premature labor the author recommends rupture of the sac and pituitrin. In uncompensated cardiac disease, induction can be in

question only in the beginning of pregnancy and then only in multiparæ. The latter cases should also be treated individually. The induction should consist in tamponing the cervix uteri and vagina and, if possible, in rupture of the sac. Evacuation of the uterus is accomplished with abortion forceps and a dull spoon. Finally the author states that the prohibition of marriage is not justifiable in well compensated cardiac disease. In cases of uncompensated cardiac disease, or those which are near the limit of compensation, each and every case should be judged individually.

BJÖRKENHEIM.

Van der Hoeven, P. C. T.: Myoma Operation During Pregnancy. (Myoomoperaties in de zwangerschap). *Nederl. Mandscr. v. verlosk. en Vrouwenz.*, 1913, ii, 285.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author gives a short résumé of the operative treatment of fibroids during pregnancy, giving case histories and references to the most important literature on the subject. He then reports three of his own cases in which pregnancy was not interrupted after enucleation of the fibroids and living children were born at term. The prognosis is very favorable for both mother and child.

STRATZ.

Von de Velde: Myoma, Retroflexion, and Pregnancy (Myoom, retroflexie en zwangerschap). *Nederl. Mandscr. v. verlosk. en Vrouwenz.*, 1913, ii, 290.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports three cases of pregnancy complicated by myomata and retroflexion. In the first case the myoma was situated in the anterior wall of the uterus and was enucleated during the fourth month of pregnancy by laparotomy; abortion followed three days later. There were no further complications. In the second case the myoma was situated in the cul-de-sac of Douglas. The uterus rose out of the pelvis in the course of the pregnancy. Spontaneous delivery of a living child resulted after the tumor had been lifted out of the pelvis bimanually. In the third case the pregnancy was complicated by peritonitic symptoms as the tumor had grown from the posterior uterine wall and was adherent in the cul-de-sac. At term Cæsarean section was performed and a living child delivered. The uterus with the placenta and fibroid was then amputated supravaginally *en masse*. The recovery was uneventful.

STRATZ.

Kosmak: The Diagnosis and Treatment of Eclampsia. *Bull. Lying-In Hosp., N. Y.*, 1913, ix, 129.

By Surg., Gynec. & Obst.

Considerable stress is laid upon the diagnosis of the premonitory signs, as the prophylaxis is of such great importance. Each patient should be warned by the physician of the significance of headache, slight nausea, dizziness, and visual disturbances during the last two months of pregnancy. The author calls particular attention to those cases which have a toxæmia without convulsions.

When the patient is seized with a convulsion he gives immediately $\frac{1}{4}$ grain of morphine followed by the administration of cathartics and enemas together with blood-letting in suitable cases. He warns against the indiscriminate use of chloroform and believes that many deaths have resulted from chloroform poisoning. Diaphoresis is encouraged by wrapping the patient every two or three hours in a blanket rung out of hot water until perspiration is free. In the absence of œdema the blood-stream is diluted by colonic irrigations with normal salt solution, not less than 4 gallons at a time with a temperature of 115° F. Eclampsia comes on between the seventh and ninth month and if labor does not proceed spontaneously, pregnancy should be deliberately terminated without dangerous haste. Where the pulse is of high tension viratrum veride and nitroglycerin are used.

In Kosmak's summary he urges:

1. The certainty of diagnosis.
2. Governing the treatment by the signs and symptoms of each individual case.
3. Conservative sedative and eliminatory measures before radical operative measures.
4. One convulsion should never decide the surgical interference.

ROBERT T. GILLMORE.

Schlossberger, A.: Two Cases of Eclampsia Cured by Means of Hypophyseal Extract (Zwei Fälle von Eklampsie geheilt mit Hypophysenextrakt). *Deutsche med. Wchnschr.*, 1913, xxxix, 1046.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Case 1. The patient, forty-two years old, was at term in her fifth pregnancy. The cervix was closed and convulsions had been repeated. The urine showed a five per cent albuminuria. 1.1 cc. pituglandol and 0.02 gm. pantopon was injected. Convulsions ceased after one and one half hours and consciousness returned after three hours. A second dose of pituglandol was given. Spontaneous delivery occurred five hours after the first injection. Recovery was complete. Case 2. The patient was twenty-three years old and six months pregnant in her second pregnancy. She was unconscious, having repeated convulsions and anuria. Injections were given as in Case 1. After forty-five minutes the convulsions ceased and diuresis began in three hours. A second injection was given and spontaneous delivery occurred in five hours. The puerperium was normal.

HAPPICH.

Routh, A.: Observations on the Toxæmias of Pregnancy and on Eugenics from the Obstetric Standpoint. *Lancet, Lond.*, 1913, clxxxv, 63.

By Surg., Gynec. & Obst.

The author gives a brief review of the recent work on the toxæmias of pregnancy, serum diagnosis, the relation of the organs of internal secretion and their genital functions, and lactation.

In discussing eugenics from the standpoint of obstetrics he says: "The chief aim of those seeking to endow motherhood should be to give every

mother an assurance of security and well-being during the whole time of pregnancy, labor, and the puerperium, each of which is to her a period of anxiety and stress."

Eugenics should begin before birth, not afterwards. When syphilis is suspected small doses of mercury given during pregnancy often result in a healthy child. "It has been computed that if women were properly examined in pregnancy half the still-born children would be saved."

Routh believes that the registration of births should be compulsory not only after "viability" but also for every period of pregnancy. C. H. DAVIS.

Carr: Cæsarean Section. *W. Va. M. J.*, 1913, viii, 11.
By Surg., Gynec. & Obst.

The author gives a brief history of this operation, and reports that he has performed six Cæsarean sections without a death. Three of his patients had contracted pelvis. In one case where the measurements were carefully taken the true conjugate was 6½ cm. Two patients were girls under sixteen years of age who had been in labor sixteen hours, with only partial descent of the heads, and the cervix partially dilated and rigid. A fibromyoma in the sixth case made a modified Porro operation necessary.

The author believes that with the present low mortality and low morbidity, Cæsarean section should be considered in every case of difficult labor, provided a skillful surgeon and good nurse are to be obtained.
C. H. DAVIS.

Hartmann, K., and Loeschcke, H.: The Uterine Scar Following the Suprasymphyseal Extraperitoneal Cæsarean Section (Die Uterusnarbe nach suprasymphysärem extraperitonealem Kaiserschnitt). *Gynäk. Rundschau*, 1913, vii, 354.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Hartmann had occasion to extirpate, during the fifth month of pregnancy, a uterus on which he had previously performed two suprasymphyseal Cæsarean sections (the oblique incision of Frank), one incision to the right, and one to the left, of the median line.

At the time of operation the relations were normal, no adhesions of any kind being present. The scars could not be recognized macroscopically; microscopically five connective-tissue strands with intermingling muscle fibres could be seen. In the cervical musculature alongside of the scar there were cystic cavities filled with mucus. These cavities were lined by cervix epithelium and were probably epithelialized stitch canals. Outside of these cavities there was an accumulation of foreign-body giant cells surrounding unabsorbed catgut rests. The anterior wall of the cervix was decidedly thinner than the posterior, due to the bilateral scars.

Hartmann advises employing absorbable suture material and the avoidance of including the mucosa in the stitches. No adhesions will result if primary union occurs and the scars will not weaken in repeated pregnancies.
BAUER.

Van der Hoeven: The Chances for Subsequent Pregnancy after the Classical Cæsarean Section (De kans op zwangerschap na de klassieke sectio caesarea). *Nedere. Mandbl. v. verlosk. en Vrouwenz.*, 1913, ii, 96.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author investigated the subsequent history of women who had been subjected to the classical Cæsarean section at the Leyden clinic during the years 1896-1900.

There were 24 cases, one of which died two years after the operation of pulmonary tuberculosis; one could not be found, and five were unmarried. Two of the remaining seventeen had had a subsequent abortion, and only nine of the twenty-four had given birth to children. Six of the latter had delivered one child, one had delivered two, one had delivered three, and the last one had delivered seven children.

The indications for the operation had been narrow pelvis, eclampsia, etc. Six of the seventeen had had a subsequent Cæsarean section; five of the six then remained sterile. The author thinks that intra-abdominal adhesions are the cause of the low fertility of these women, and is in favor of the vaginal (cervical and transperitoneal) section. STRATZ.

Beckmann, W.: Cæsarean Section Performed for Vaginal Stenosis Following an Operation for Vesico-Vaginal Fistula (Kaiserschnitt wegen Scheidenstenose mit vorausgegangener Blasenfisteloperation). *Ztschr. f. gynäk. Urol.*, Leipzig, 1913, iv, 95.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author claims that in Russia vaginal stenosis following an operation for vesico-vaginal fistula is quite commonly an indication for Cæsarean section.

A patient, twenty-seven years old, acquired a scar stenosis of the vagina following the first pregnancy. The contraction was situated about the middle of the vaginal canal and a catheter introduced through it entered the bladder. Operation was performed by tearing the scar tissue and suturing the fistula, whereupon a cure was effected. Shortly after, a pregnancy occurred, the patient, however, not entering the clinic until three days after the onset of labor and after rupture of membranes had occurred. The child was dead. The lower part of the vagina was markedly contracted, the lumen being about the size of a lead pencil. The cervix was not palpable. Pulse and temperature were normal. Classical Cæsarean section was performed, and she was delivered of a macerated foetus weighing 3300 gm. A supravaginal amputation of the uterus was performed for the purpose of sterilization. The recovery was uneventful.

BOXER.

Lange: Suprasymphyseal, Cervical Cæsarean Section (Zur Frage des suprasymphysären, cervicalen Kaiserschnittes). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 681.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Lange reports twenty-eight cases treated by this method. He gives also his experiences with it in

forty-two cases of contracted pelvis. The operation was performed transperitoneally (a) in cases where haste was necessary on account of weakness of the foetal heart sounds, (b) in cases where a previous extraperitoneal section had been performed and the presence of firm adhesions was suspected, and (c) in cases which were operated upon shortly after the onset of labor. Otherwise, in twenty-four cases, the extraperitoneal method was employed, but to completion only in eighteen. Of the total number, twenty-six had been examined previously outside of the clinic. In fourteen instances the operation was performed before the membranes had ruptured or within an hour afterward; but in the rest a much longer time intervened, in one case sixty-one hours.

The maternal mortality was very low, only one case dying from sepsis. One of the children was born deeply asphyxiated and could not be resuscitated. No accidental injuries occurred. The number of cases of atony was rather high (13) in spite of the subcutaneous injection of an active ergot preparation shortly before operation. In six cases tamponade of the uterus was necessary; in seven adrenalin injected into the uterine musculature was sufficient. The operation was performed on four women for the second time. In two of these cases the old uterine scar was firm; in the other two it was thinned. In one case, however, the scar resisted contractions for thirteen hours until complete effacement and dilatation had occurred. In the other case the scar resisted contractions for six hours without rupture. A temperature of over 38° C. occurred twelve times during the puerperium, but in most instances it was transient, lasting for only a few days. One prolonged case of sepsis ended fatally.

ZINSSER.

Kitner, O.: Cæsarean Section of the Dead and the Dying Woman (Kaiserschnitt an der toten und sterbenden Frau). *J. akush. i. jensk. boliez.*, St. Petersburg., 1913, xxviii, 539.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports six cases of Cæsarean section, four on dead, and two on dying, women. Among the former there were two cases of eclampsia, myocarditis cordis with marked pulmonary oedema and hyperæmia, and one marked kyphoscoliosis. The operation was performed within one to ten minutes post mortem. Usually Kitner was forced to operate with unsterile instruments. All of the children were in a more or less severe asphyxia, but were revived.

The two operations upon dying women were for severe eclampsia. The children were born alive. The mothers died within two to four hours after the operation. Kitner is in favor of Cæsarian section in all cases of dead women with viable or living children. It is much more difficult, however, to set the indication on the dying, as the moment of approaching death is determined with difficulty. Cæsarean section should be performed in all cases except those in which the mother is conscious and refuses the operation. Nearly always the child is

saved, and occasionally the mother also. The section on the dead should be performed in all cases under aseptic conditions just as on the living.

GINSBURG.

Veit, J.: The Technique of Cæsarean Section (Zur Technik des Kaiserschnittes). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 713.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Cæsarean section to-day is a harmless procedure. Schauta advises the use of the transperitoneal instead of the complicated extraperitoneal Cæsarean section. Veit also recommends the classical section for general practice, his reason being that on account of its relative simplicity it can be performed more easily by inexperienced operators. Veit places his patient in the high pelvis position which brings the uterus out of the pelvis. He makes one third of the incision above the umbilicus and two thirds below it. The general peritoneal cavity is walled off with towels, and the uterus incised transversely. An assistant then forces the uterus upward so that the transverse incision lies above the abdominal incision. The placenta and membranes are next removed and the uterus is sutured with silk and a second sero-serous suture of catgut. After the removal of the pads the uterus is allowed to drop into the pelvis. An extreme ante flexion of the uterus is to be avoided, as it may cause rupture. In the manner described the uterus can be emptied without allowing a trace of its contents to enter the peritoneal cavity. The author has operated upon forty patients by this method with good results for the mother in every case.

HOHL.

Pobedinsky, N.: The Results Obtained with Cæsarean Section in Russia During the Last Twenty-Five Years (Die Erfolge des Kaiserschnitts in Russland in den letzten 25 Jahren). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 757.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Prior to 1885 all but three cases of Cæsarean section performed in Russia ended fatally. Since then 446 operations have been performed including those done for relative indications. Between 1885 and 1890 forty-two operations were performed, principally for contracted pelvis, with a mortality of forty per cent due to bad sepsis and unfavorable conditions. Between 1891 and 1900 there were eighty-four cases, mostly for contracted pelvis, with a mortality of six per cent. The improvement in results was due to better asepsis. Between 1901 and 1912 there are recorded 320 cases, principally for contracted pelvis but also for scar contraction of the vagina, and for tumors. Recently it has also been performed for eclampsia, placenta prævia, stenosis of the cervix and for transverse presentation. The mortality was 7.5 per cent, but only 3.2 per cent if eclampsia and malignant tumors are excluded.

Frequently bad conditions were met, such as examinations by ignorant and dirty midwives, other operative procedures, presence of temperature pre-

ceding the operation, and early rupture of the membranes. Since 1908 the extraperitoneal methods have been employed, but abandoned again, as they proved illusory. Incision through the placenta offers a good prognosis. Simplicity of technique is the keynote and there is but little danger of bladder injury. Dead children were found nineteen times in 320 cases, in twelve of which, however, the indication was absolute. The operation was performed twice on the same patient in thirty-two cases with one death.

Resection of the tube was employed ninety-nine times in twenty-five years for sterilization, the indications being repeated Cæsarean section, tuberculosis and osteomalacia. In the obstetrical clinic at Moscow Cæsarean section on the living was never performed before 1889, because of absence of absolutely contracted pelvis, poor results at other clinics, and poor surroundings. Between 1889 and 1904 contracted pelvis were found in twenty-three per cent of the cases. These were principally treated by prematurely induced labor and craniotomy. The first Cæsarean section was performed in 1895 with good results. Since then thirty-one operations have been performed, chiefly for contracted pelvis. A maternal mortality of nine per cent and a foetal mortality of 0 are recorded. Outside of the clinic there were fourteen Cæsarean sections performed in Moscow between 1886-1900.

WETZEL.

LABOR AND ITS COMPLICATIONS

Paine, A. K.: Some Aspects of Labor Mechanism at the Pelvic Brim. *Boston M. & S. J.*, 1913, clxix, 154. By Surg., Gynec. & Obst.

The author states that he finds from a study of the female pelvis in cadavers and skeletons that the promontory of the sacrum does not project a material distance into the inlet. He believes with Spiegleberg, Dorland, and DeLee that in the majority of vertex presentations engagement in the transverse diameter of the inlet is the rule.

Paine believes that in high forceps operations the axis traction blades may be applied antero-posteriorly to the sides of the head, provided the perineum is well dilated previous to the application. Very little force is necessary to bring the head into the pelvis in any case in which the operation is justifiable, provided the soft parts are properly dilated.

C. H. DAVIS.

Lehle: The Treatment of Frontal Presentation (Die Behandlung der Vorderhauptslagen). *München. med. Wchnschr.*, 1913, lx, 860. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This rare abnormal presentation was found 320 times in 3914 labors of the Munich gynecological clinic. Concerning the etiology of the frontal presentation none of the commonly mentioned causes were frequently met with. The child plays the chief rôle in the origin of the frontal presentation

more often than the mother. Foetuses of small and middle weight were found in the overwhelming majority (84.3 per cent), while large children weighing more than 3500 gm. with a normal-sized or over-sized head were seen in 15.7 per cent.

The prognosis is relatively favorable for the mother. Spontaneous expulsion of the child occurred in 77 per cent of the cases, the remaining 23 per cent necessitating surgical intervention. The forceps were used 65 times (20.2 per cent), version and extraction 4 times (1.2 per cent), version and perforation of the head 5 times (1.6 per cent). The prognosis for the child is not so favorable. In the 323 cases of frontal presentation 57 of the children were more or less asphyxiated and one died. Thirty children died (9.4 per cent), death being directly or indirectly due to the course of labor. Those deaths are included which took place during the first 3 or 4 days after labor, the result of trauma sustained during birth (hæmorrhages of the brain). In the 65 cases which were terminated by the forceps, the delivery of the head was impossible seven times.

If the extraction with forceps in frontal presentation is impossible the author recommends the method of repeated applications of the forceps as taught by Scanzoni in order to improve the position of the head. The operation consists in applying the forceps diagonally, the concavity being applied to the frontal part of the head. The head is then rotated to a transverse position by a simultaneous traction of the forceps downward. The forceps are removed and again applied as in the low transverse presentation (concavity directed against the occiput). The head is rotated to the median position and delivered in the occipital posterior presentation. The results of the operation are very favorable. The technique is not difficult. All seven cases mentioned above would have terminated favorably, if treated in this manner.

In conclusion the following rules are given for the treatment of frontal presentation: 1. Long-continued expectant treatment which results in 77 per cent of spontaneous births. 2. Combined external and internal rotation of the foetus according to Fehling's method with corresponding positions of the parturient woman. 3. If Fehling's method is unsuccessful, delivery of the child in frontal presentation. 4. If these prove ineffectual, Scanzoni's procedure must be performed.

HIMMELHEBER.

De Bovis, R.: Acute Dilatation of the Stomach During Labor and Immediately Thereafter (La dilatation aiguë de l'estomac chez les parturientes et les nouvelles accouchées). *Semaine méd.*, 1913, xxxiii, 169. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Although acute dilatation of the stomach quite often follows surgical operations, it is exceedingly rare during labor and the early puerperium, only ten such cases having been published thus far. These cases the author divides into three groups according to the pathogenesis.

In the first of these groups he places the idiopathic or true obstetrical cases, i. e., those without preceding gastro-intestinal disturbance and without anæsthetic during labor. Prolonged and painful labor, eclampsia, and constitutional injury induced by loss of blood, intoxication, eclampsia, or infection, together with an increase in the ptosis due to rapid delivery and traction on the mesentery may be predisposing factors. In one case of contracted pelvis and breech presentation, the author attributed the dilatation to compression of the duodenum by the head. In other cases the swallowing of air aided the dilatation which was due primarily to accumulation of gas within the bowel.

The second group includes cases following anæsthesia for such operative interference as Cæsarean section. In these it is difficult to state how much the obstetrical element contributes to the purely surgical cause.

In the third of his groups the author considers those cases in which the dilatation is merely an accidental complication of pregnancy as shown in a case of perforated gastric ulcer with intestinal obstruction and in another of Cæsarean section in a cachectic patient suffering from uterine cancer. In another instance the author attributed the dilatation to excessive loss of blood due to placenta prævia. The mortality of the 17 cases published, excluding three patients who died of perforation by gastric ulcer, hæmorrhage, and cancer cachexia, was 3, or 21 per cent. The treatment is the same as that in cases due to surgical interference, i. e., abdominal position, gastric sounding, and lavage.

VASSMER.

Ries-Finley: Uterine Dystocia, Secondary to Mitral Stenosis. *Northwest Med.*, 1913, v, 196.

By Surg., Gynec. & Obst.

The author reports a case and tabulates the following general principles regarding valvular heart disease.

1. Of all the varieties of chronic valvular heart disease mitral stenosis is most commonly accompanied by heart failure during pregnancy.

2. Aortic stenosis without mitral stenosis is rare in women; few cases of pregnancy in women who have aortic without mitral disease come under observation.

3. When symptoms of heart failure have preceded pregnancy, they are made worse by pregnancy.

4. Repeated pregnancies at short intervals cause greater risk of heart failure than do few pregnancies at longer intervals.

C. H. DAVIS.

PUERPERIUM AND ITS COMPLICATIONS

Freeman: Incidence of Malaria in the Puerperium. *Southern M. J.*, 1913, vi, 429.

By Surg., Gynec. & Obst.

The author believes that malaria is a fairly frequent complication in the puerperium. He mentions the following points in establishing the diagnosis:

1. Absence of any demonstrable signs of sepsis.
2. Periodicity, or the return of the fever at a definite time. His experience shows that with the malaria there is a definite return of fever on the third or fourth day.

3. Examination of the blood for plasmodia. Positive findings are absolute, but negative findings are not.

4. Control of the fever and restoration of the patient by quinine.

In the discussion, prophylactic doses of quinine were advised during the puerperium whenever there is a history of malaria.

C. H. DAVIS.

Öhman, K. H.: Ovarian Abscess After Labor (Ett Fall af pyovarium efter partus). *Finska läk.-sällsk. handl.*, Helsingfors, 1913, lv, 447.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Öhman reports a case of ovarian abscess in a primipara, 31 years old. The pyo-ovarium formed in connection with labor. The patient was successfully operated upon five months after labor. Streptococci were found in the pus. The ovary was the size of a goose egg with one large, and several smaller, abscesses. The tube of the corresponding side and the adnexa of the other side were healthy. Part of the ovarian stroma was still present. Microscopical examination showed that only the outer 0.5 cm. of the abscess wall was intact. In this wall were found connective tissue proliferation, numerous plasma cells and polynuclear leucocytes. The eosinophile cells had penetrated more deeply into the intact tissue layer than the others. The contents of the abscess cavity consisted for the most part of polynuclear leucocytes, eosinophiles, a few lymphocytes and here and there a plasma cell. The bacteria did not take the stain in the sections.

BJÖRKENHEIM.

MISCELLANEOUS

Engelhorn: The Biological Diagnosis of Pregnancy (Zur biologischen Diagnose der Schwangerschaft). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 731.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Engelhorn reviews Abderhalden's method for the diagnosis of pregnancy and the results so far published that have been obtained by it. He, himself, has tested the dialysis method in 108 cases. In each instance he used the serum of both pregnant and non-pregnant women. The results were as follows: In 60 cases of pregnancy the reaction was positive 49 times from the fourth to the tenth month and negative 11 times during the ninth and tenth months. In 48 non-pregnant women, among whom were women with normal genitalia, with prolapse, cancer, tumors, and lying-in women, the reaction was positive in 31 cases and negative in 17. The author examined also the action of the serum of pregnant and non-pregnant women on coagulated cancerous tissue, fetal liver tissue, and ovaries. The results were contradictory. He does not consider

Abderhalden's dialysis method a specific reaction as a diagnosis cannot be rendered by it. RUHEMANN.

Jellinghaus and Losee: The Sero-Diagnosis of Pregnancy by the Dialyzation Method. *Bull. Lying-In Hosp., N. Y., 1913, ix, 68.*

By Surg., Gynec. & Obst.

Their experiments are based on 563 examinations of different individuals and while not absolutely conclusive, they favor the opinion that it is possible by the dialyzation method to distinguish between healthy pregnant and healthy non-pregnant women.

ROBERT T. GILLMORE.

Abderhalden, E.: The Diagnosis of Pregnancy by Means of the Dialytic and Optical Methods (Die Diagnose der Schwangerschaft mittels des Dialysierverfahrens und der optischen Methode). *Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Abderhalden gives a review of the principles of ferment reaction in the body and explains the dialyzation and optical methods. He holds that the methods are theoretically correct and the bad results reported are unquestionably due to poor technique.

The sources of the error are as follows: 1. The blood used is hemolytic or is not well centrifugalized, containing cells which digest in the dialyzing test. 2. The thimbles used are not well tested and constant. 3. The organ has not been thoroughly freed from coagulable bodies which react with ninhydrin. If the serum alone and the organs alone contain each less than enough amino acids to give a positive reaction when placed together, the addition may be enough to give a reaction though no digestion has taken place. This may occur in conditions like carcinomata, in salpingitis and hæmatomata where proteid products are absorbed in the blood. Only a violet or bluish color is positive.

Mayer, A.: Abderhalden's Pregnancy Reaction (Die Abderhaldensche Schwangerschaftsreaktion). *Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Mayer considers Abderhalden's pregnancy reaction a valuable aid to diagnosis. By its use it is possible to determine whether the conception took place just before the first missed period or just after the last one. The reaction is positive in cases of recent extrauterine pregnancy, but negative in old cases in which hæmatoceles have formed and functioning placental tissue is no longer present. The chief value of Abderhalden's method consists not in the diagnosis of pregnancy, but in the study of the pathology of the internal secretions. For the latter study Mayer used the male and female germinating glands.

The serological behavior towards the female germinating glands with their great influence on the entire organism is of particular interest. We know of many diseases in which we suspect a dysfunction

of the ovary. Mayer included in his investigations cases of climacteric neurasthænia, hysteria, metro-menorrhagia, dysmenorrhœa, amenorrhœa, myoma, etc., in which we often find macroscopically changed ovaries. The practical value of these investigations is shown by a positive Abderhalden reaction towards the ovary in a case of metro-menorrhagia and a case of amenorrhœa. This means that in these instances there was a dysfunction of the ovaries and the hæmorrhage was oöphorogenous. A curettement, which is the usual treatment for these cases, would hardly have been successful, as it attacks the endometrium and not the diseased ovary.

Pregnancy also shows interesting conditions. Diseases such as osteomalacia, vesicular mole, emesis, and, perhaps, eclampsia, are believed to be due to disturbances in the ovarian function, particularly of the corpora lutei. It is possible that the serum of diseased pregnant women may react differently toward the ovary or corpus luteum from that of pregnant women.

Schäfer, P.: Abderhalden's Ferment Reaction (Fermentreaktion nach Abderhalden). *Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Schäfer examined one hundred and twenty-three cases with Abderhalden's dialysis method sixty-five of these also with the optical method; sixty-two were pregnant and sixty-one were not. He found two incorrect diagnoses in the pregnant. Hæmatoceles gave varying results. In the non-pregnant he had eleven incorrect diagnoses, the greater number of which were found in cases of carcinomata and myomata. In twenty-three cases of tumors he had nine failures, and in thirty-eight cases of women with normal genitalia or senile atrophic genitalia he had two failures. With the optical method correct diagnosis was missed twice, a positive reaction having been obtained in a case of myoma and a negative reaction in a case of cornual pregnancy at the second month. Two cases of pregnancy and four cases of cervical cancer split off placental tissue as well as peptone-free cancer tissue.

Petri: The Specificity of the Placenta-Splitting Ferments of Pregnancy Serum (Über die Spezifität der gegen Placenta gerichteten Fermente des Schwangerschaftsserums). *Zentralbl. f. Gynäk., 1913, xxxvii, 731.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The history and development of Abderhalden's reaction is given in detail. To test the specificity of this reaction Petri attempted to determine whether the serum of pregnant women is capable of splitting albumin other than placental albumin, and whether placental albumin can be split by the serum of non-pregnant women. In both of his experiments he obtained negative results. The placenta was split only by the sera of two very anæmic myoma patients, the serum of a patient with a tubo-ovarian cyst, and that of a patient with

recurrent cancer of the breast. On the theory that, as a protoplasm foreign to the blood, the spirochetes that are contained in the blood of luetic patients could cause the formation of ferments, the author examined the sera of luetics. Only cases that had received treatment gave positive reactions. In explanation of this remarkable fact Petri states that spirochetes which have not been injured are so powerfully viable that the organism is not able to form ferments against them until they have been weakened by mercury or salvarsan. RUHEMANN.

Decio: The Fat and Cholesterin Content of the Blood in Pregnancy and the Puerperium under Normal and Pathological Conditions

(Sul contenuto in grasso e colesterina del sangue delle gravide e delle puerpere in condizioni normali e patologiche). *Ann. di ostetr. e ginec.*, 1913, xxxv, 281. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author examined the serum of 53 pregnant, puerperal, and normal women to determine the fat and cholesterin content of the blood in these conditions. Blood was obtained at the same hour each day, 4 hours after a meal, so as to exclude digestion lipæmia. He found a slight increase during the first few months of pregnancy, gradually increasing until the end. The same findings are present during labor and early puerperium as during the last months of pregnancy. No difference existed between primipara and multipara.

The cause of the accumulation of fatty substances the author attributes to a decrease in the lipolytic ferment, to a general sluggishness of the processes of oxidation in the pregnant organism and to an increased assimilation of food. The increased activity of the organs of internal secretion, especially of the adrenal and corpus luteum, may account for the production of lecithin and cholesterol. In eclampsia the fatty substances are particularly increased. The author considers the cholesteræmia a protection against the toxins of pregnancy. For figures and the method of procedure the reader is referred to the original.

SEMON.

Fraenkel: Internal Secretion and Pregnancy (Innere Secretion und Schwangerschaft). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

1. The antibodies which Fraenkel used in the treatment of osteomalacia are biological, not biochemical. They are the secretions of the other blood-forming glands which have become dormant in the serum of those castrated. 2. Fraenkel did not find interstitial glands in the uterus walls in his far-reaching comparative examinations and they were not confirmed by anyone in the transactions of the Congress. However, the reproductions of specimens made by Seitz and Wallart convinced him that it may occur. Their inconsistency, however, excludes a specific function. 3. The claim that ovulation regularly occurs during the intermenstruum has been confirmed by Villemin, John

Miller, Robert Meyer, Seitz and Schroeder. Seitz justly criticises Fraenkel for making macroscopical examinations in living persons with healthy internal genitalia. However, this is better than all the other methods which make use of extirpated diseased genitalia, since the exact determination of the age of the corpus luteum cannot be made microscopically. 4. The corpus luteum law has not been doubted by anyone. Seitz and Landsberg confirm it, using entirely different methods.

Josephson, C. D.: The Proof of the Presence of Spermatozoa in the Cervical Canal in Two Cases of Rape Eighteen Hours after the Perpetration of the Crime (Spermatozoer pavisade i cervix uteri i två fall av våldtäkt 18 timmar efter våldet). *Allm. sven. Läkartidn.*, Stockholm, 1913, x, 245.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author describes two cases in which he was able to demonstrate the presence of spermatozoa in the cervical discharge eighteen hours after the perpetration of rape. None were found in the vagina. In one case the discharge was removed with a cotton swab on a metal applicator and spread on a glass slide; in the other it was obtained with a Braun's syringe. Several applicators saturated with wood vinegar were then introduced into the uterine cavity to prevent conception if possible.

The author refers to the studies of Blumm and Runge in regard to the length of time that spermatozoa may survive in the vagina and uterus, and discusses the methods of examining for them in these organs. BJÖRKENHEIM.

Warnekros: Placental Bacteræmia (Placentare Bacteriæmie). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The usual positive findings in the blood during febrile abortion have led the author to bacteriologically examine the blood of patients during pyrexia in the course of labor. In each case the examinations were systematically conducted as follows: 1. Removal of secretions from the uterine cavity before delivery. 2. Blood was obtained from the veins before and after delivery. 3. Bacterioscopical staining of microscopic sections from the placenta and its membrane.

Of the thirty cases examined the temperatures were always higher than 38.5° C. The blood tests, always made before delivery if high temperatures or rigors occurred, were positive in twenty-one; i.e., more or less numerous colonies of bacteria were demonstrated in the large glucose agar tubes. Infections were mostly mixed. The examination of the blood which was removed after delivery remained sterile with one exception. This patient died three days post-partum from sepsis. Another patient succumbed to tuberculosis which rapidly progressed during the puerperium. In all the other cases the fever subsided rapidly and the patients were discharged cured. Both blood examinations remained

sterile in nine cases, bacteria not being found either before or after delivery. None of these women died.

The fever is caused by the bacteria or by an absorption of their toxins. These sporadic findings in the blood which are positive only during labor find an anatomical cause in the placenta. The placenta were delivered under aseptic precautions; portions were cut out in different places, embedded and stained for bacteria. The examination showed that the germs were found in the subamniotic layer of the chorion in all protracted labors and it did not matter whether bacteria were demonstrated in the blood or not. In those cases in which the blood findings were positive the bacteria traveled from the amniotic cavity through the entire layers of the membranes and the decidua basilaris which was thickly permeated with bacteria, especially at its lower placental pole. An invasion from the decidua into the intervillous spaces could be observed.

Numerous bacteria were also found within the placenta between the villi. The behavior of the bacteria in these temporary placental bacteræmias, towards the uterine wall is of special interest. A positive proof of this is naturally rendered with difficulty, as cases which recover could not be used for this investigation. However, such a uterus was obtained for an examination. It was from a patient who entered the hospital with a very high fever. Streptococci grew in the blood which was obtained before delivery. Labor was terminated by a perforation of the dead child. The patient died from a severe anæsthesia asphyxia after the delivery of the child. The placenta was still in the uterus. The organ with the placenta was removed in toto, hardened, and cut in sections. The bacterioscopic examination showed an infection of the placenta. The bacteria had permeated the amniotic membranes and were seen in the intervillous spaces. They were further seen in the canals of the afferent veins. However, an infection of the uterine walls had nowhere taken place, the uterine musculature being absolutely free of any bacteria, so that a purely placental infection existed. This case must be considered as one of those in which the patients have fever during labor, have bacteræmia, are immediately delivered and then rapidly recover.

Warnekros concludes that if bacteria reach the uterine cavity after a premature rupture of the sac, a bacterial decomposition of the amniotic fluid ensues. If the blood remains free from bacteria, the clinical picture is less stormy and pronounced rigors are absent. The rise in temperature is a result of an absorption of toxins from pathogenical micro-organisms, these toxins being formed in the uterus. This primary toxæmia is only a transitional stage sooner or later followed by an invasion of the bacteria into the blood stream. Hence all forms of severe fever during labor are acute placental bacteræmias. The indication for treatment resulting from these investigations is that where women have a rise in temperature during labor, they must be delivered immediately.

Bordé: The Location of the Placenta (Sulla sede della Placenta). *Ann. di ostetr. e ginec.*, 1913, xxxv, 248.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Bordé, on 100 after-births in which the exit of the child through the membrane could be seen distinctly, measured the least and the greatest distance of the edge of the placenta from this opening so as to determine the seat of the placenta. In 65 cases he found the edge of the placenta not more than 8 cm. from the uterine os; 11 of these were primipara. In 25 cases the placenta was only 4 cm. or less from the outlet of the uterus; 38 times he found it between 4 cm. and 8 cm. Bordé considers that the placenta usually is located in the lower part of the uterus.

WIEMER.

Costa, R.: The Placenta of Giant Infants (Osservazioni sulle placente dei feti macrosomi). *Ann. di ostetr. e ginec.*, 1913, xxxv, 253.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

On the basis of the findings of the microscopical examinations made in twenty-eight cases of giant fetuses the author divides the placenta into two groups. Those of the first group are characterized by a finer structure which is essentially the same as that of children of normal growth. Those of the second group have a decidedly greater number of chorionic villi, which are mostly small and densely crowded together, a marked development of the capillary vessels within the villi, and a striking congestion of the intervillous spaces. Both groups show a pronounced deposit of fat, with the smaller fat droplets in the periphery, and the larger ones in the center, of the villi. On account of these findings the giant growth is thought to be due to an increase in the foetal metabolism.

COLOMBINO.

Asch: Intra-Uterine Sucking (Über intra-uterine Ernährung). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxvii, 701.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Asch observed in a corresponding location on the skin of both forearms of an overmatured child a defect which resembled a burn. When the arms were brought close to the child's mouth it immediately began to suck on the injured portion. Asch later observed another child who had distinct sucking marks on the forearm and the backs of the hands. He concludes that children may practice nursing during intra-uterine life and that to this circumstance the described changes in the skin are due.

ZINSSER.

Zangemeister: A Young Human Embryo (Junges menschliches Ei). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author demonstrated sections of a young human embryo. It was characterized not so much by its youth as by the fact that it filled out an embryological link. The uterus was extirpated in this

case eleven days after a period was missed. The embryo was about twenty-one days old according to embryological data. The uterus was carefully opened and immediately preserved. A number of pictures were made. In the first picture was seen the anterior surface of the uterus with the groove opposite the egg capsule; in the second was seen the posterior surface with the flat ovum deeply embedded in the thickened mucous membrane. The ovum itself measured only 11 mm. In the third and fourth pictures the ovum was opened; one could see the broad villous space, the cavity and the embryo. The first microscopical picture showed the numerous dilated glandular spaces; around them the compact layer and then the villous zone with the intervillous spaces. The villi were without vessels and the intervillous spaces were filled with cloudy albumen-like material. It was especially noticeable that although it was not a very young ovum, nevertheless there was no blood in the intervillous spaces. It could, therefore, be concluded that blood is not normally found in the intervillous spaces so early in the human, and that nutrition must take place from the substance mentioned.

The extensive development of the mesodermal part of the villi was remarkable when the smallness of the embryo was considered. The embryo was connected to the chorion by means of the abdominal pedicle. The amniotic cavity was a flat space surrounding the dorsal side of the embryo. The next picture showed the same parts but much enlarged and showed the still open medullary groove. From the bowel anlage a small protrusion was given off, the allantois. In the abdominal pedicle numerous vessels were observed. The next section passed through the middle of the body. Here again could be seen the small amniotic cavity. The yolk sac was represented by a thin-walled, lax, much folded sac. Above the cord was found the closed spinal canal; on both sides of it could be seen segmented somites; to their side the somatic plates with the cœlomic fissure which was continued into the exocoelom.

In addition to the demonstration the author discussed the age of the embryo. A large number of young human embryos are now on hand. If these dated from a definite phase of the ovulation and menstruation cycle, i. e., if fecundation occurred only in a limited period of the ovulation cycle, then the different ova insofar as the relation to the last menstrual period is concerned, would make a regular curve, presuming a similar rate of growth for all. The author investigated the different reported ova according to size and age after the last menstrual period. He found that the facts so ascertained regarding them are spread out over a considerable space of time and that it is utterly impossible to plot a curve. From this we can conclude that the age of the ovum may show considerable variation even though the interval after the last menstruation is the same. If one now considers the age according to embryological development it can be seen that

fecundation may occur at any time between two periods, but that the time when fecundation is most likely to occur is about a week before the first period missed. If the age is correct when judged according to embryological development, then the different ova ought to render a definite curve. That is indeed the case. The curve produced by the length of the embryo and of ova is almost identical with the above curve. From these curves the age of the embryo when judged according to development is approximately correct.

In regard to the absolute age of the ovum nothing definite can be stated in the human as the assumed latent period (in which no growth can be demonstrated) may be considerably shorter than supposed. From a study of the curves the author would rather believe that to be the case. If that is a fact, then all the known ova are considerably younger than they are supposed to be. This, however, may be ascertained later by further studies on animals, which can be accurately controlled.

Wagner, G. A.: Contributions to the Question as to the Origin of the Amniotic Fluid, with Pathological-Anatomical, Experimental, and Clinical Examinations of the Functions of the Foetal Kidneys (Beiträge zur Frage der Herkunft des Fruchtwasser mit pathologisch-anatomischen, experimentellen und klinischen Untersuchungen über die Funktion der fötalen Nieren). Leipzig and Vienna: Deuticke, 1913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

To date, the question as to whether normally the fetus secretes urine in utero has not been answered. The author has attempted to solve the problem by pathological-anatomical, experimental, and clinical investigations. He concludes that the foetal kidney does not functionate under normal conditions and therefore does not take part in the formation of the amniotic fluid.

The report contains also a detailed account of foetal malformations such as closure of the urethra, dilatation of the urinary bladder, and hypo- and hyperplasia of the kidney. It gives also a description of the experiments undertaken to determine the function of the foetal kidneys, and the results of the examinations of the urine of the new-born. An extensive bibliography is appended.

ZANGEMEISTER.

Bublitschenko, L. I.: Blennorrhœa of the New-Born and Its Prevention (Blennorrhœa neonatorum und deren Verhütung). *Med. Rundschau*, 1913, xl, 540.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Examination was made of smears and cultures of the secretion from the eyes of new-born children affected with gonorrhœal and non-gonorrhœal diseases. The author is of the opinion that the conjunctiva of the new-born, especially in the first days of life, is comparatively more sensitive to all kinds of inflammatory diseases than the conjunctiva of adults. The causative factor of the severe eye in-

flamations is usually the gonococcus. Also at times this coccus may produce merely a slight catarrh. It is possible that more than one half of the blennorrhœas are produced by streptococci, pneumococci, etc. There are also blennorrhœas the biological causative factor of which cannot be determined. Intra-uterine blennorrhœas usually result from a dissemination of the infecting agents through high lacerations of the amniotic membranes.

The author gives statistics of the prophylactic treatment of gonorrhœa with different remedies and in conclusion reports his own experience. He prefers weak, non-irritating solutions such as 5 to 10 per cent solutions of protargol as recommended by Ahlfeld, and especially a solution of sublimate 1:4000. He states that as the result of the regular disinfection of the hands of the attendants and the bodies of the parturient women with a 1:2000 solution of sublimate, and of the eyes of the new-born with a 1:6000 solution of sublimate, the number of conjunctivitis was reduced from 0.3 per cent in 1904-1907 to 0.17 per cent in 1909-1911.

KRINSKI.

Nádory, B.: Simple Surgical Treatment of the Umbilical Stump (Einfache chirurgische Versorgung des Nabelschnurrestes). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 765.

By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The method recommended by the author complies with the three requirements of Ahlfeld; i. e., that there be positive prevention of an infection, protection against secondary hæmorrhages, and no necessity for after-treatment. As soon as the pulsation of the umbilical cord ceases, the cord is tied tightly with a heavy silk ligature at the line of demarcation between the skin and Wharton's jelly. The cord is then cut short. The stump and umbilical ring are painted with tincture of iodine. The child can be bathed daily if an application of the tincture of iodoine is made after the bath. The umbilical stump will fall off on the second or third day. The umbilical funnel heals rapidly. J. VOIGT.

Freudenthal: A New Procedure for the Enlargement of the Generally Contracted Pelvis (Ein (neuer) Kunstgriff zur (unblutigen) Erweiterung des grad-verengten Beckens). *Berl. klin. Wchnschr.*, 1913, I, 688.

By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

The author reports his method of gaining more room in contracted pelvis. It is as follows: After rupture of the membranes, the entrance of the head is aided as follows: A roll is laid under patient's back, each knee is grasped by an assistant, (leg pointing outward) and during each pain it is brought closely to the median line of the abdomen, even pressing against it. Labor is rapid and uneventful.

The explanation is as follows: On account of the passive fixation of the femur, the gluteal muscles inserted on the trochanters are contracted in the effort to stretch out the legs, nolens volens, and exert

outward traction on the ilia. Stretching of the sacro-iliac ligaments results, the promontory recedes and the antero-posterior diameter is increased.

WETZEL.

Von Hoytema, D. G.: The Use of Pituitrin in Obstetrics (Pituitrine in de verloskundige praktijk). *Nederl. Mandschr. v. verlosk. en Vrouwenz.*, 1913, ii, 296.

By *Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.*

From his own practice and that of his colleagues the author has collected 88 obstetrical cases in which pituitrin was employed. In 11 of these it was used for post-partum hæmorrhage; in the remaining 77, as an ecboic. In four cases no result was obtained, and in three they were doubtful. In 10 cases there was a moderate, and in 56 cases, a definite, increase in the contractions. In 7 instances it caused powerful contractions. Of the 77 children delivered, 10 were slightly asphyxiated and 7 were dead. Of the latter, 3 were dead before the beginning of labor.

STRATZ.

Rowland: Pituitary Extract in Obstetrics. *Maryland M. J.*, 1913, lvi, 161. By *Surg., Gynec. & Obst.*

In this article the author illustrates the effect of pituitary extract in the induction of labor, the treatment of abortion, and its effect on cases in first and second stages of labor. Four case reports illustrate the induction of labor and treatment of abortion.

Concerning the use of pituitrin in the first and second stages of labor, the author cites twenty-one cases in which the drug was used. In these cases the external os was for the most part slightly dilated and the indication for the use of the drug was ineffectual pains.

In this series Rowland gives four tables of pains, pulse, and blood-pressure to show the relationship of one to the other. In one or two cases the pituitary extract seemed to have no effect, but in the majority of cases pains were increased and labor hastened. In only two of the cases was the foetus asphyxiated or in any way harmed; one was a forceps delivery and the other was also a forceps delivery in an eclamptic after a convulsion, in which instance the child was born dead.

The author states that he got satisfactory results in all cases where there was some dilatation of the cervix or where the head was engaged. In two cases pituitrin was successful in a single dose after an attempt at forceps delivery had failed. Also whenever the head is on the perineum the delivery is always prompt.

Conclusions. 1. Pituitrin is efficient to finish abortion and to induce labor in conjunction with other means. 2. It usually causes advancement of the head with the cervix half dilated. 3. It is most successfully used in the last half of the second stage of labor to save delivery by forceps. 4. It probably causes no danger to the child. 5. It should not be used in toxic conditions with high blood-pressure.

EUGENE CARY.

Heaney, N. S.: A Contribution to the Study of Pituitrin. *Surg., Gynec. & Obst.*, 1913, xvii, 103.
By Surg., Gynec. & Obst.

This article is the result of a clinical and laboratory investigation into the physiological effects of pituitrin. It is divided into two parts, the first taking up the effects of pituitrin upon the normal and elevated blood pressures of human beings, and the remaining part, the effects of pituitrin upon the lactating mammary glands.

Heaney finds that the effects of pituitrin upon the circulation are directly dependent upon the route of administration. When given intravenously it produces an immediate and profound disturbance, a marked increase in blood-pressure of from 20 to 60 mm., and a lowering of the pulse of from 10 to 30 beats per minute, this being accompanied by marked systematic effects, pallor, great anxiety and symptoms resembling collapse. The disturbance is of brief duration, but is severe during the 3 to 4 minutes that it lasts.

Given by intramuscular injection, pituitrin influences the circulation only occasionally and then but slightly. The subcutaneous administration has no pressure effects.

Because of the possibility that an unrecognizable circulatory disturbance may contra-indicate a sudden rise of blood pressure, Heaney advises giving pituitrin intravenously only in grave emergencies, such as severe post-partum hæmorrhage. The subcutaneous method should be the routine procedure, care being taken to avoid puncturing a blood-vessel and introducing this powerful substance into the blood-stream.

In his inquiry into the asserted galactogogic action of pituitrin upon human beings and animals, Heaney was unable to demonstrate clinically that the extract has any effect. He thought that the ejection of milk observed by the original experimenters, which occurred immediately upon the intravenous injection of the hypophysis, might be another expression of the already well-known effects of this substance on the smooth muscle fibres of the body. In these instances it showed its action on the breast muscle bundles, which by their contraction produced a squeezing-out of the milk contained in the breast. Heaney repeated his animal experiments upon human beings, using an instrument to measure the contraction of the breast instead of a cannula inserted into the nipple. In every observation he obtained definite evidence that the breast contracted measurably when the patient received pituitrin intravenously. The knowledge that the breast contracts as a result of this medication, together with the negative clinical results obtained when he tried to increase the milk supply in mothers with failing lactation, leads him to conclude that the

results of the earlier workers in this field were wrongly interpreted; that the stimulus which extracts of the hypophysis seems to give to the milk-flow is really an assertion of the effect that this substance has on all smooth-muscle fibers.

Vortisch-van Vloten: Statistics of a Chinese Policlinic (Statistik einer chinesischen Poliklinik). *Arch. f. Schiffs- u. Tropen-Hyg.*, 1913, xvii, 253.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author was consulted 16,000 times by 5,500 Chinese during 1909-1912 when he conducted the hospital Yin Asi in the central part of the province of Canton. Over 3,600 case histories are available. Here only the obstetric and gynecological material is discussed. Four cases of birth anomalies occurred, three of puerperal fever, 14 of menstrual anomalies, 2 of disturbances during pregnancy, 8 of mammary abscesses and tumors, 4 cases of vaginal and uterine catarrh, 2 of vaginal prolapse, and one of ovarian tumor.

The following operations were performed: 2 colporrhaphies, 1 bladder-stone, 1 extirpation of a cancerous vulva. The female residents of that district avoid the "devil's doctor;" a European midwife has never been called to a confinement among them. In another district three to four days distant however she is called quite commonly. Female children are of little consequence in China; they are frequently killed after birth, or if later they prove weaklings, are starved. The care of the umbilical stump is bad; the cord is not dressed, even after the stump falls off. If suppuration sets in chewed leaves are applied; if hæmorrhage occurs, tobacco or earth are put on so that tetanus commonly results. In spite of continuous nursing for two to three years the infant mortality is high, as the children are given everything else in addition.

In cases of pathological labors the author was always called too late. The Chinese women cannot believe that European physicians have learned the obstetrical art. Labors are usually easy; the hips are well developed under the loose mode of dress. Mid-wives are rare; usually mothers-in-law or neighbors render the necessary aids without any asepsis. If the labor is prolonged internal and external massage is resorted to. The after-birth is removed by traction on the cord or by mammal extraction. Labor and puerperium are frequently surrounded by superstition and idolatry.

Among the Europeans there were many menorrhagias and abortions during the first to the third month, probably induced by a latent malaria. Labors in Europeans were usually normal.

The author presents literature in regard to Chinese physicians and their methods of treatment.

VON MILTNER.

GENITO-URINARY SURGERY

KIDNEY AND URETER

De Berne Lagarde and De Beaufond: The Suprarenal Capsules in Cancer of the Kidney (Les capsules surrénales dans le cancer du rein). *Arch. urol. clin. de Necker*, 1913, i, 72.

By Journal de Chirurgie.

Taking up in detail a discussion which was started before the French association for the study of cancer, the authors state that nothing authorizes systematic ablation of the suprarenal capsule in the course of nephrectomy for cancer such as was once recommended by Grégoire.

After a detailed anatomical study of the blood vessels and the lymphatics of the suprarenal, they point out the theoretical dangers of unilateral suprarenalectomy as long as our means for investigating the functional value of these glands in a specific case, and especially the independent value of each one of them, are inadequate. In the anatomopathological chapter they show how rare and often vague are the observations that are published concerning the condition of the suprarenals in the course of cancer of the kidney. By means of a letter written to them personally they prove that Israel did not recommend ablation of the suprarenal in the course of nephrectomy for cancer as he is quoted as having done. They then describe seven hitherto unpublished studies of the suprarenals in cases of cancer of the kidney. Three of these belonged to Legueu and four were mine. Their conclusions are as follows: Of the thirty-seven observations in which mention was made of the suprarenal capsules, no information as to their condition was given in four cases; in eighteen cases the suprarenals were intact, and in fifteen cases they were neoplastic. In eleven of the fifteen cases in which the suprarenals had been invaded there were accompanying metastases in the lungs, the liver, the bones, and the nervous system, and in two of these the suprarenal metastasis was located on the side opposite to the cancer of the kidney. Therefore the disease of the suprarenal may be considered a regular metastasis, a sign of generalization. The systematic ablation of the suprarenal in the course of a nephrectomy for neoplasm is not recommended.

MAURICE CHEVASSU.

Krotoszyner: On the Differential Diagnosis of Appendicitis and Nephrolithiasis. *Cal. St. J. Med.*, 1913, xi, 287. By Surg., Gynec. & Obst.

The author reported a case of an apparent right-sided nephrolithiasis, which proved to be an appendicitis with several fecal concretions.

The diagnosis was made from pain on micturition,

agonizing in character. The urine was cloudy with abundant pus microscopically; meatoscopy showed no urine from the right side, while the right ureteral catheter met an obstruction 15 cm. from the vesical outlet. Chromocystoscopy showed no color from that side within an hour. Radiography showed apparently normal kidney shadows on both sides, with two small well-defined shadows on the right side of the spinal column at the site of the ureteral impediment and apparently in the course of the ureter as ascertained by a shadow-casting ureteral catheter.

On operation the right ureter was found embedded in dense adhesions, and in the attempt to free them the peritoneum was opened and a long and tortuous appendix was found as a part of the adhesions upward and downward to a point near the insertion of the bladder.

Since the operation, no urine can be obtained from the right side and the obstruction is still present at the same site, but as the patient suffers no discomfort she refuses further interference.

LOUIS GROSS.

Ghoreyeb: A Study of the Mechanical Obstruction to the Circulation of the Kidney Produced by Experimental Acute Toxic Nephropathy. *J. Exp. Med.*, 1913, xviii, 29.

By Surg., Gynec. & Obst.

In a study of the influence of disease on the circulation of various organs, as shown by the perfusion method, Ghoreyeb came to the following conclusions as regards the kidney: Blood serum is the most satisfactory fluid available. There is some impediment to the circulation of serum through kidneys in which nephropathy has been produced by uranium nitrate, potassium chromate, potassium arsenate, cantharidin, and diphtheria toxin. The histological changes in the cells of these kidneys — swelling of the epithelium and changes in the glomeruli — are such as would produce obstruction. The circulatory obstruction is greatest in those kidneys in which the above changes are most marked. In the kidneys in which the drug has caused destruction of the cells the impediment is less marked than in those in which the cells are swollen but otherwise intact.

The impediment to the flow of perfusing serum is in direct relation to the anatomical obstructive lesion, and tends toward normal with the cessation or healing of the process. Bacteria, though present in large numbers, impede but little the flow through the kidney. Rabbits may have spontaneous nephropathy and show no casts or albumen. A certain amount of obstruction is noted in these cases.

JAMES F. CHURCHILL.

Payne and Macnider: An Experimental Study of Unilateral Hæmaturia of the So-Called Essential Type. *Surg., Gynec. & Obst.*, 1913, xvi, 93.
By Surg., Gynec. & Obst.

Payne and Macnider review the literature on this subject and report five cases of unilateral hæmaturia of the so-called idiopathic type, which were relieved of all symptoms by nephrotomy. The authors are inclined to believe that in the majority of these cases the condition is one of chronic inflammation of one type or another. A series of experiments was conducted for the purpose of excluding certain acutely developing vascular changes as being the principal cause for the occurrence of blood in the urine.

The experiments came in three groups: (1) Those in which it was attempted to induce a hæmaturia by interference with the vaso-constrictor nervous mechanism of the kidney. (2) Those in which a hæmaturia was attempted by the introduction of a nephrotoxic substance into the renal artery which had a special affinity for the vascular element of the kidney. (3) Those in which the blood supply to the kidney was interfered with by occluding the renal artery by the use of a clamp. These experiments would, therefore, apparently contradict Klemperer's theory that angioneurotic œdema, and also Albarran's idea that a slight lesion of nephritis, is a sufficient cause of the unilateral hæmaturia. Finally it seems most probable, since acute nephritis can be eliminated, that the clinical condition is due to a chronic nephritis; one in which there is a rupture of a glomerular vessel and the bleeding kept up by the high local pressure so constantly found in chronic nephritis.

Newman, D.: Renal Varix and Hyperæmia as Causes of Symptomless Renal Hæmaturia. *Brit. J. Surg.*, 1913, i, 4. By Surg., Gynec. & Obst.

The author states that there is always a cause for symptomless renal hæmaturia. This article deals with two of the more obscure causes, namely, renal varix and renal hyperæmia. The only symptom of both these conditions is a painless hæmaturia. The fact that the blood comes from the kidney is established by means of the cystoscope. As a rule, rest has little effect upon the hæmorrhage from renal varix, but it may temporarily stop the hæmorrhage from renal hyperæmia.

If in the treatment of these cases the bleeding does not respond to rest, the kidney should be exposed and its position examined. Any pressure or distortion of the renal vein should be removed and the kidney anchored in such a position that a twist or pressure cannot recur. If the kidney position seems normal, the kidney should be split, and the papillæ carefully examined for varices. Any varices found should be removed either by cauterization, or by cutting away the papillæ.

Sometimes it is impossible by operation to find the source of the hæmorrhage and even after the kidney is split, the bleeding may continue. If the hæmor-

rhage is severe and the patient is getting weak, the kidney should be removed.

The technique recommended for splitting the kidney is to pass a silver wire, threaded upon a liver needle, into the pelvis of the kidney and out again. The wire should then be drawn through the kidney substance with a sawing motion. V. LESPINASSE.

Israel, W.: Pyelotomy (Zur Pyelotomie). *Ztschr. f. Urol.*, 1913, vii, 524.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In Israel's clinic pyelotomy is given the preference over nephrotomy. However, in forty-two consecutive operations for renal calculus nephrotomy has been performed eighteen times during the past three and a quarter years. The author emphasizes the importance of a good X-ray picture. In pyelotomy drainage was employed only when there was much sand or gravel present and then only with a view to later pelvic irrigation. The pelvic wound healed without the formation of a fistula even when it was not possible to suture it exactly. The peripelvic fat was carefully sutured in all cases. SCHULZE.

Corbett, F. J.: A Form of Experimental Nephritis. *Urol. & Cutan. Rev.*, 1913, xvii, 358.
By Surg., Gynec. & Obst.

The author divides his studies into three groups. In the first group he describes the condition of kidneys after the ureter has been tied for twenty-four hours, six days, and twenty-six days. The twenty-four hour kidney he found to be larger and heavier than normal. It presented a mottled appearance upon section. The convoluted tubules might have a dilated lumen, a compressed epithelium often showing obliteration, and degeneration or necrosis of the epithelial cells. The blood vessels were dilated. The six-day kidney was pale, œdematous, and increased in size. There was a deformity of the tubules and round-celled infiltration. The twenty-six day kidney was white in color and presented a picture of extreme hydronephrosis. The tubules were dilated, the epithelium deformed, and fatty changes were noted in the epithelium. The epithelial cells were pigmented.

In the second group Corbett assembles those kidneys in which there had occurred marked fatty changes accompanied by a deformity of the tubules, but with very little cell necrosis or degeneration and comparatively little interstitial change. In these kidneys he found that fatty degeneration began in the twenty-four hour kidneys and extended through the whole series in a large per cent of the cases.

In the third group the author cites only one case. This was as follows: The cross section showed a great deal of œdema and in one place an infarct. Cultures from the urine were sterile. In the areas remote from the infarct the microscopical picture showed so much œdema that some of the tubules seem to be actually compressed. The cells of these tubules appeared swollen and abnormal. These pictures suggested potential atrophy. Aside from

this example of primary atrophy, no other was encountered.

Corbett's conclusions are as follows: The histological picture resulting from atresia of the ureter may belong to any one of the following groups: (1) pictures closely resembling nephritis; (2) pictures of fatty change; (3) pictures presenting œdema with a possible suggestion of atrophy. There is no definite proof to show that the changes are mechanical or due to a nephrotoxic substance.

A. C. STOKES.

Pousson, A.: Indications for Operation in Chronic Nephritis (Indications opératoires dans les néphrites chroniques). *J. d'urolog.*, 1913, iii, 717.
By Journal de Chirurgie.

The therapy of chronic nephritis is purely symptomatic and the frequent impotency of medical treatment has caused surgeons to attempt to restrict the spread of the trouble and to remove any mechanical obstruction to function. To overcome the effects of congestion on the kidney with its inelastic capsule, decapsulation and nephrotomy have been performed. Both operations reduce the intrarenal tension. The second, by the abundant hæmorrhage that it causes, relieves the system of a part of the toxins that have accumulated in the blood and thus lessens the vascular tension. It also terminates the capillary paralysis which was preventing serous transudation. Decapsulation should be used in the less serious cases; nephrotomy, when there is serious uræmic intoxication, subcutaneous œdema, oliguria, anasarca, and high blood pressure. The mortality of operation is only 13 per cent. The danger is least in cases of œdema alone, is greater in cases of uræmia either alone or associated with œdema and with oliguria, and is greatest in cases of uræmia associated with oliguria without œdema. From the point of view of permanent relief, the results are best in cases of œdema alone or of œdema associated with uræmia or oliguria. Next best are those obtained in cases of uncomplicated uræmia. Third best are the results obtained in cases of uræmia complicated by oliguria, and fourth, those obtained in cases of uræmia associated with oliguria and œdema.

Indications and contra-indications for operating:

1. Urinary syndrome. This syndrome, the most constant of all, consists in quantitative and qualitative changes in the urine, and the presence in the urine of albumin, cylindrical casts, leucocytes, and red blood corpuscles. Persistent oliguria and diminished salt content are indications for operation; the amount of albumin is not an indication.

2. Choloræmic syndrome. The indications vary according to whether the dropsy is located in the subcutaneous cellular tissue, the large serous cavities, or the viscera. Anasarca is an indication; ascites is not a contra-indication, but hydro-pericardium and hydrothorax and œdema of the lung increase the operative risk.

3. Cardio-vascular syndrome. Myocarditis with dilation of the heart, hypertrophy of the left side

of the heart with a violent beat of the apex and gallop rhythm are contra-indications, as is also Bright's pericarditis. Hypertension of the arteries accompanied by true hypertrophy of the heart is an indication.

Functional troubles of vision due to a slight intoxication of the encephalic nerve centers may be helped by operation, but changes in the optic nerve and retina cannot.

J. TANTON.

Mysch, W. M.: The Surgical Treatment of Chronic Nephritides, Hæmaturica and Dolorosa (Beobachtungen über die chirurgische Behandlung chronischer Nephritiden, Hæmaturica und Dolorosa). *Chir. arch. Veliaminova*, 1913, xxix, 419.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the picture of nephritis new factors must be taken into consideration as the result of the newer diagnostic methods, cystoscopy, ureteral catheterization, functional diagnosis. These new methods have shown that nephritis may be unilateral, that the involvement of the organ may be only partial, that a nephritic kidney may excrete urine free of albumin and casts, and that there are forms of nephritis which are manifested principally by pain (colic nephritis) and by hæmorrhage (nephritis hæmaturica). The three interesting observations of the author belong to the last group.

Mysch had two cases of nephritis hæmaturica and one case of colic nephritis or so-called "nephritis dolorosa." The first case of hæmaturic nephritis was that of a man 24 years of age. On the basis of the pains and findings of a careful cystoscopic examination, and of functional tests, a diagnosis of tuberculosis of the kidney was made. A nephrectomy proved this diagnosis to be incorrect. On careful examination the organ was found to be affected only with chronic nephritis with numerous hæmorrhages into the straight urinary tubules. The patient recovered. In the second case the patient, a woman 53 years of age, was suffering with œdema. Blood was found in the urine. A cystoscopic examination showed that the ureter from which the blood escaped was normal. On the basis of this and other examinations a diagnosis of operative nephritis hæmaturica of the right kidney was made. The operation confirmed the diagnosis and a decapsulation was performed according to the method of Albarran. Complete recovery resulted.

The history of hæmaturic nephritis is associated with the names of Israel, Albarran, and Pousson. The diagnosis of this disease is contingent upon the elimination of all other conditions that are accompanied by hæmorrhage from the kidney. It should be treated by decapsulation and nephrectomy. According to the statistics of Pousson published in 1909, there were no deaths in 6 cases of decapsulation, and four deaths in 12 cases of nephrectomy. The removal of the kidney is indicated only in severe attacks.

The third case was that of a man 28 years of age who suffered from colicky pains. The pains could

be induced also by introducing fluid into the pelvis of the kidney. The trouble was diagnosed as nephritis dolorosa. Calculus, tuberculosis, pyelitis, etc., were excluded by the absence of pathological elements in the urine and by negative X-ray findings. At the operation the kidney was decapsulated and a small piece of kidney tissue was removed for microscopic examination. The patient recovered and was free from further attacks of pain. Microscopic examination showed changes similar to those of severe chronic nephritis. The case, therefore, was the kind of nephritis that is manifested only by colicky pains. This form is seldom observed. Pousson found records of only 14 cases of it in the literature and Kümmell has observed only 10 cases.

SCHAAK.

Ruge: The Present Standpoint in Regard to Nephritis and Nephritis Surgery (Über den derzeitigen Stand einiger Nephritisfragen und der Nephritischirurgie). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 565r. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Albumen and casts may at times be demonstrated in the urine of perfectly healthy individuals after severe bodily exertion and must be considered as physiological, depending, according to Leube, upon a hypersensitiveness of the renal filter. Orthostatic and lordotic albuminuria in their pure forms are relatively benign and are probably due to mechanical disturbances and irritation of the renal circulation. By means of powerful massage of the kidney the excretion of albumen, casts, epithelium, and red blood cells may be produced. The disturbances incident to wandering kidneys must likewise be considered as "traumatic nephritis." On the other hand operative findings have proven the interesting fact that even in the absence of any urinary findings definite nephritic processes may exist in the kidney, excluding the well known cases of contracted kidney with intervals of no albumen. The first symptoms of such "nephritis without albumen" are frequently nephralgias and hæmaturia. The opinion at present seems to be that such hæmaturias are due really to chronic nephritis, which is always bilateral. A unilateral nephritis or partial nephritis is possible but rare.

Action of decapsulation: Acute and infectious nephritis shows an injury and swelling of the vessel-bearing connective tissue followed by inflammation and degeneration of the epithelium. The swollen and enlarged kidney is compressed within its unyielding fibrous capsule; the circulation and excretion of urine is interfered with. Decapsulation relieves the tension, and even after complete anuria a marked excretion of urine will follow the operation in cases of acute nephritis. Tissue that has been destroyed of course cannot be replaced as regeneration of kidney epithelium does not occur, but injured cells will frequently recover after the decapsulation. Edebohl believes that a collateral circulation is established between the cortex and the surrounding tissue and that this is particularly marked if the kidney is embedded in omentum. Other writers

deny this and claim that a new dense capsule again develops.

In toxic nephritis, such as that following poisoning with carbolic acid or bichloride of mercury, the kidney should be decapsulated, especially if internal remedies fail. The kidney of eclampsia should be decapsulated in case no improvement follows the emptying of the uterus. In cases of acute nephritis following infectious diseases the kidney likewise should be decapsulated in case internal remedies do not improve the oliguria or the uræmic symptoms. Acute infectious nephritis is of hæmatogenous origin and can usually be differentiated from the ascending pyonephritis. It is usually unilateral and demands a nephrotomy or nephrectomy following ureteral catheterization. In chronic Bright's disease decapsulation has been performed in cases in which no improvement followed a thorough course of treatment. The decapsulation should be bilateral. In a fair percentage of cases clinical improvement results. Decapsulation is followed by improvement in certain cases of uremia due to nephritic anuria or oliguria. Severe hæmorrhages in cases of chronic nephritis not improved by internal therapy should be treated surgically. In addition to the decapsulation a nephrotomy should be done to make sure of the etiologic cause of the bleeding. Decapsulation and splitting up of the kidney should be performed also for nephralgias in which hæmorrhages similar to those of chronic nephritis occur.

OEHLECKER.

Murard: Chronic Nephritides from the Surgical Viewpoint (Les néphrites chroniques au point de vue chirurgical). *Thèse de doct.*, Lyon, 1913, May. By Journal de Chirurgie.

The author has tried to ascertain from the study of the literature and his own experience the rôle of surgery in chronic nephritides, both Bright's disease and the other renal sclerosis characterized by a pain and hæmaturia. The benefit of kidney operations in cases of hæmaturia was discovered by accident and it was thought that even Bright's disease might be cured by surgery.

The author finds that renal intervention is at least innocuous. In the unilateral cases, suppurative and tuberculous kidneys and kidney stone cases, in which the trouble in the other kidney is compensatory, surgery is undoubtedly of great value. Decapsulation has been tried with some success. A capsule is rapidly reformed and there are not enough anastomosing blood-vessels to have any effect on the drainage of the kidney. Nephroepioplasty is not more efficacious. Nephrotomy which is sometimes followed by complete cessation of albuminuria is an important operation.

Murard describes the hæmaturias for which there is no demonstrable cause as hæmaturias of latent nephritis. These are in some cases due to a tuberculosis or a derangement of function in the hæmatopoëtic organs, especially the liver. In these cases decapsulation is not sufficient and nephrotomy is

often only temporary. Renal tumors and continuous hæmorrhage are contra-indications.

Painful nephritis without nephroptosis or renal tuberculosis is more rare than is generally believed. The pain may be due to a perinephritis or Bright's disease or an active localized sclerosis accompanied by inflammatory congestion following trauma calculus or attenuated infection. For this condition freeing of perirenal adhesions and decapsulation, or if there is congestion, nephrotomy is advised.

Operative treatment of Bright's disease is made justifiable only by the importance of medical methods. Nephrotomy may help if there is congestion but as congestion is but a symptom and not a cause of the nephritis it is really of no avail.

G. COTTE.

Blum V.: The Physiology of the Kidneys and the Functional Diagnosis of the Kidneys in Renal Surgery and Internal Medicine (Nierenphysiologie und funktionelle Nierendiagnostik im Dienste der Nierenchirurgie und der internen Klinik). Leipzig and Vienna: Deuticke, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The principal function of the kidney is to maintain for the blood the same osmotic pressure that corresponds to the freezing point of the blood, i. e., 0.56. The osmo-regulating function of the kidney consists of several individual functions chief of which is a water filtration, a salt secretion, and a resorption of some of the water and some of the salts. The urine is a watery solution of organic and inorganic salts which in part are products of metabolism and in part substances which cannot be utilized by the organism. It is the function of the kidney to prevent an accumulation of these salts in the blood which would lead to uræmia.

Injurious substances are excreted as follows: The glomeruli are filters with extensive semipermeable membranes by means of which the blood gets rid of its superfluous water. It is assumed that also at the same time a small quantity of salts are filtered out. The urine in the glomeruli is alkaline. In the convoluted tubules of the first and second order through active cellular activity urinary salts are secreted. Uric acid, acid salts, and phosphates, which are excreted by the tubular epithelium, render the glomerular filtrate acid. In the medulla of the kidney (in the region of Henle's loops and the straight urinary tubules) some of the water and some of the salts are resorbed. In addition to its principal function of maintaining the normal osmotic pressure of the blood, the kidney possesses synthetic functions, such as the secretion of sugar after the injection of phloridzin. It is supposed also that it elaborates an internal secretion. Although careful examinations have shown that both healthy kidneys do not always excrete the same amount of substances of absolutely the same character, this fact does not decrease the value of the functional tests. In performing functional tests each individual function of the kidney should be tested separately: water filtra-

tion, salt excretion, and water resorption. The so-called "topical diagnosis" should be made.

Former methods led only to an anatomical diagnosis of the kidney trouble, and only the total insufficiency could be determined from the oedema, uræmia, cardiac hypertrophy, etc. To-day by means of ureteral catheterization and functional diagnosis the sufficiency and insufficiency of each individual kidney can be determined exactly. Of the methods of functional diagnosis Bouchard's test for the toxicity of the urine and Thudicum's determination of the urinary coloring matter are not of use clinically. On the other hand cryoscopy for the determination of the molecular concentration of the blood and urine according to the method of von Koranyi is of great value. The freezing point of the urine varies even in healthy kidneys to a considerable degree; according to Kümmell and Rumpel, between -0.90° and -2.30° .

Cryoscopy is of particular value because it permits a comparison between the separated urines, and because it can be used in experimental polyuria. Blood cryoscopy is of considerable value in determining the function of the kidney. In normal kidneys the concentration of the blood is constant; the freezing point according to von Koranyi is always -0.56° . According to Kümmell the freezing point of the blood is of considerable value in the prognosis of nephrectomy in cases of unilateral kidney disease. In combination with other functional tests and clinical observations blood cryoscopy in many instances may be the deciding factor. It is easily possible, however, that $\delta = -0.56$ and we would not dare, therefore, to perform a nephrectomy; if, for instance, the halves of both kidneys were diseased and both kidneys were just sufficient to carry on the necessary kidney function blood cryoscopy would yield normal values. A nephrectomy would in this case produce renal insufficiency. Ureteral catheterization, however, would prevent such an error. By means of blood cryoscopy we can measure the osmo-regulating function of both kidneys with exactness.

Albarran's experimental polyuria measures the power of the kidneys to excrete water. Healthy kidneys adapt themselves to increased demand. In artificial polyuria the healthy kidney changes and increases its functional capacity whereas the injured organ as the result of a lack of reserve strength has lost this power either entirely or in part. Another method of testing the functioning of the kidney is to note the excretion of coloring substances that have been injected. The methylene blue of Kutner forms colorless derivatives in the body and is therefore not practical. The indigo-carmin test of Völcker and Joseph is excellent, the coloring matter passing through the kidney almost unchanged and acting similar to a urinary salt. The nature of the excretion therefore allows us to form conclusions in regard to the salt-secreting ability of the kidney.

The indigo-carmin test is of great significance in unilateral affections: a delayed excretion of the

blue substance immediately shows us the seat of the involvement. The phloridzin test has not been found reliable in functional tests of the kidney. The new diastase determination method of Wohlgemuth of the Casper clinic appears to be a good indicator of the functional ability of the organ. The phenolsulphophthalein method of Geraghty and Rowntree is in some respects superior, and in other respects inferior, to the indigo-carmin test. The red color appears only in an alkaline medium; it is a very delicate, almost too delicate, reagent. The value of the method lies in the quantitative determination of the coloring substances excreted.

After a critical review of the methods for functional diagnosis Blum speaks of the attempt at topical diagnosis of the kidney on the basis of functional tests. For the surgical diagnosis ureteral catheterization and radiography have decided many doubtful questions. Before nephrectomy is performed it must be ascertained whether the remaining kidney will be sufficient for the increased work thrown upon it. It is therefore not the momentary function which must be determined but the maximal functional ability, the reserve force of the organ, which is the deciding factor. This is best determined by testing the individual parts of the entire function. The experimental polyuria of Albarran will answer the question as to the water filtration. The urinary excretion, especially the concentration of the indigo-blue excretion, is a valuable indicator for the salt-secreting function of the tubular epithelium. To determine the resorption of water and some of the salts in the medulla, injections of caffeine and diuretic may be considered. Blood cryoscopy shows very exactly the osmo-regulating activity of the kidney. Blum demonstrates very clearly the value of these functional tests in typical cases.

In cases of prostatectomy the author considers it a serious mistake to omit the determination of the functional activity of the kidneys before the operation is performed since success depends so much on the condition of the kidneys. Also before performing a prostatectomy the freezing point of the blood should be determined. In such cases, the phenolsulphophthalein method is a good one to use in determining the functional activity of the kidneys. The operation should be postponed if the beginning of the excretion is delayed beyond twenty-five minutes and if the quantity of salt excreted during the first hour is less than twenty per cent. In conclusion the author points to the value of determining the functional activity of the kidneys in medical cases. The slip-shod method of diagnosing "nephritis" should be supplanted by modern diagnostic methods based on topical functional tests.

OEHLCKER.

Bryan, R. C.: The Early Diagnosis of Renal Tuberculosis. *N. Y. M. J.*, 1913. xcviii, 20.
By Surg., Gynec. & Obst.

Bryan emphasizes the cardinal features of the diagnosis, the pitfalls, errors and elusive symptoms

of the incipient stage of miliary tuberculosis of the kidney, and selects from his series the histories of three cases for deductions.

He finds that uranalysis is inconstant in the character of its results, and gives evidence of a more or less severe nephritis; the urine is of low specific gravity; the reaction is regular and constant; pus, the characteristic index of invasion, is intermittent; the few cells, in the regularly acid urine, are a clue for diagnosis which is especially valuable if stone can be positively excluded; albuminuria is unilateral; pollakiuria is noted peculiarly during the night but is not marked during the day.

All voided urine should be collected, preferably in a Steinbeck's sedimentator, and preserved with boric acid, one grain to the ounce of urine. Repeated examinations of the sediment are advised.

Cystoscopy shows a fluffiness, blueness, and an injection of the ureteral opening; the tuberculin or T. R. test, von Pirquet's reaction of the skin and Calmette's reaction of the conjunctivae may be used for corroboration, but must be conducted with great caution. Injection of the sediment into the peritoneal cavity of the guinea pig is an efficient measure. Phenolsulphophthalein should be used to ascertain unilateral efficiency.

LOUIS GROSS.

Desnos: A Contribution to the Clinical Study of Strictures of the Ureter; Large Strictures (Contribution à l'étude clinique des rétrécissements de l'uretère; rétrécissements larges). *J. d'urolog.*, 1913, iii, 739.
By Journal de Chirurgie.

Strictures of the ureters may be due to trauma caused by the migration of a renal calculus or to more or less limited regions of ureteritis. These lesions after a time cause a cicatricial process which decreases the lumen of the ureter. The author has recently observed four such cases, two following slow, painful migration of calculi, and two following a previous vesical infection.

The symptoms are not pathognomonic. The strictures manifest themselves rather by the complications that they cause. These complications are a greater or less degree of renal retention with pain in the upper urinary passages, continuous or with exacerbations, and an exaggeration of the infection of the urinary tract. Accordingly ureteral stricture is to be suspected when the above symptoms are present without apparent cause, and especially when the ureteropyelitis becomes rapidly worse. A relatively slight stricture may cause considerable renal retention. Ureteral strictures may cause also reflex symptoms, a uretero-ureteral reflex in particular, which may be confusing.

Certain diagnosis can be made only by ureteral catheterization by means of a ureteral bougie. If the strictures are relatively new, dilatation by ureteral sounds allowed to remain in a while may be sufficient. In this way may be avoided the necessity for external ureterotomy, but the latter is the best method when dilatation of the stricture is impossible.

J. TANTON.

BLADDER, URETHRA, AND PENIS

Barney: A Case Illustrating the Efficiency of the High Frequency Current in the Treatment of Tumors of the Bladder. *Boston M. & S. J.*, 1913, clxix, 19.
By Surg., Gynec. & Obst.

The writer reports a case of apparently complete cure of a tumor of the bladder by means of the high frequency current. Cure was effected in nine sittings at intervals of one or two weeks. Owing to the appearance of the bladder wall at the site of the tumor at the last sitting, it was believed that the growth was cancerous. Suprapubic cystotomy showed the suspected area to be reddened, œdematous, and brawny, with a few small ulcerations and a generally rough surface. Careful study of the excised specimen by two competent pathologists failed to find any tumor cells. Cystoscopic examination of the patient nine months later showed no evidence of recurrence.

In regard to the misleading appearance of the bladder wall the writer quotes Keyes, Jr., who says: "It is a curious reaction of the bladder wall to the irritation of the current. The mucosa swells up in such a way as to simulate an infiltrating carcinoma. Several weeks' intermission in the burning will suffice for the subsidence of this."

So far as is known, no other case of bladder tumor treated and presumably cured by the high frequency current has yet been actually inspected at a subsequent time, either at operation or post-mortem. This method of treatment is, therefore, in certain cases of non-malignant growth, entirely effective.

Stevens: Diagnosis and Treatment of Multiple Urethral Calculi, with Report of Unusual Case. *J. Am. M. Ass.*, 1913, lxi, 86.
By Surg., Gynec. & Obst.

The author reports one case of multiple urethral calculi. After demonstrating the absence of stones from the kidneys, ureters, bladder, and prostate, and the normal condition of the kidneys, he concludes that the stones had formed in the urethra. He removed all by intra-urethral instrumentation.

In discussing this condition Stevens draws a distinction between calculi originating elsewhere in the urinary tract than the urethra and simply lodging there while being passed and those which form there primarily. The latter are caused by the deposition of urinary salts in abnormal pockets, such as are formed by strictures and diverticula.

GEORGE G. SMITH.

Jordan: Congenital Stricture of the Prostatic Urethra with Bladder Hyperplasia, Urethral Dilatation and Multiple Abscesses of Both Kidneys. *J. Am. M. Ass.*, 1913, lxi, 244.
By Surg., Gynec. & Obst.

The author reported a congenital prostatic stricture, which is exceedingly rare. The treatment proved unsuccessful; his patient died at the age of seven weeks, having been under observation three weeks. The post-mortem examination showed a

stricture of the prostatic urethra, one fourth inch in length. The kidneys were enlarged, cystic, nodular, and showed a chronic diffuse nephritis. The ureters were large and sacculated. The bladder was small, the walls being composed of dense fibrous tissue.

C. D. PICKRELL.

GENITAL ORGANS

Belfrage: Traumatic Total Loss of Skin of the Male Sexual Organs (*Evulsio cutes totalis genitalium virilium*). *Nord. med. Ark.*, 1913, xlv, 11.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Belfrage reports a case in which through traumatism there was a loss of the entire cutaneous covering of the penis and scrotum. The penis was covered with Thiersch grafts from the forearm, and the testicles were transplanted beneath the skin of the abdominal wall. The result was quite satisfactory. The transplanted skin on the penis was freely movable. The testicles were not fixed under their cutaneous covering, and not exposed to pressure, so that there was no interference with the sexual functions.

The author discusses the methods employed by others in similar cases and concludes that the Thiersch graft is the proper procedure for covering the penis. Where there is entire loss of scrotal skin the Thiersch method may be used, or the neighboring skin may be utilized as a plastic flap, or, lastly, the author's method of transplanting the testes may be employed.

DENCKS.

Carless, A.: A Case of Perineo-Scrotal Dermoid Cysts. *Brit. J. Surg.*, 1913, i, 39.
By Surg., Gynec. & Obst.

Examination in the case of a boy 12 years of age revealed two subcutaneous swellings in the perineum which had been present since birth and were slightly increasing in size. One of them was situated in the posterior part of the scrotum and the other at the anterior extremity of the perineum. Extending backwards from behind the two swellings was a narrow median intradermic passage or track which reached as far as the anal margin. A stream of the cyst contents could be seen rippling along the passage in the perineal raphe. Rectal examination was negative. The penis and urethra were normal. The diagnosis made was perineal dermoids with extension backwards along the raphe. The cysts and the narrow perineal canal were removed by dissection with satisfactory result.

The interest in the case lies mainly in the existence of the perineal tube.

In this connection the author cites a somewhat similar case reported by Edington of Glasgow. The patient, a boy two days old, with an imperforate anus, had a perineal tube that communicated with the bowel.

The author believes that pathological conditions of this kind are the result of an error in the development of the external genital folds. DROZDOWITZ.

Bucklin: Castration and Operation for Varicocele and Hydrocele Without Wounding the Scrotum. *Med. Rec.*, 1913, lxxxiv, 108.

By Surg., Gynec. & Obst.

The author has had 30 years' experience with the anterior scrotal incision in operations upon the testicles and cord, and has had frequent failures, primarily because the incision did not expose the diseased tissues sufficiently to allow of thorough examination. He is now firmly converted to the transverse inguinal incision of Kocher in all operations upon these parts.

While advocating castration for all malignant growths in tuberculosis of the testicles, he is in favor of attempting to cure the tuberculous developments by the administration of one tumblerful of pure sterilized milk every 36 minutes for 12 hours, followed on retiring by a sufficient dose of fresh castor oil. Three months' trial of this treatment is given before resorting to castration. An increase of weight contra-indicates castration.

In hydrocele, Kocher's operation is advocated. The author states that this procedure produces a cure in every case and leaves the testicle surrounded by its normal coverings.

A. NELKEN.

Tait: Recurrence of Hydrocele after Radical Treatment. *Cal. St. J. Med.*, 1913, xi, 258.

By Surg., Gynec. & Obst.

Tait claims there is a tendency of late to return to the operation of total resection, as there are so many recurrences following eversion. Errors in technique and choice of operative procedures, besides the numerous modifications of a good operation (Longuet), have caused these recurrences. From his animal experimentation he is convinced that the protective rôle of the tunica vaginalis, like that of other serous membranes, has been greatly overestimated.

The procedure he follows is the operation perfected and simplified by Longuet in 1900; in this method he does away with all dissection, omitting the delivery of the tumor and making a new bed for the testicle.

Tait divides the recurrences into three groups: In the first small group the operation of eversion was done without securing the everted tunic. In the second group the opening in the tunic was smaller, but here again no suturing was done; this constitutes the widely heralded Andrews bottle operation, which its author in 1907 and again in 1912 recommended without reserve and urged "that it supersede all other operations for hydrocele." In the third group of recurrences the cases of hydrocele are due to subacute infections, tuberculosis of the epididymis, and chronic pachyvaginitis.

Among the results of these experiments (eversion, resection, injection of irritants) on animals, he found the following:

Infection of the tunic is invariably followed by a marked change in the testicle, reduction in size, sclerosis, and peripheral areas of atrophy. Under

strictly aseptic conditions eversion is not followed by atrophy of the testicle. The testicular sclerosis is not more marked after eversion than following the injection of irritants into the tunic. Excision of the tunic gives rise to more marked testicular reaction than does eversion. That the function of neither the interstitial nor the spermatogenic cells is affected by bilateral eversion of the tunica vaginalis is sufficiently proved by the total absence of the developmental abnormalities in and the multiplication of puppies after said operation. It would seem, nevertheless, that the testicle is no exception to the law of general pathology relating to the creation of points of lessened resistance by traumatism or infection.

The author reaches the following conclusions:

1. Although eversion is only a palliative measure, it will, when properly performed, prove satisfactory in over 90 per cent of hydroceles.

2. Longuet's method, *without delivery of the sac*, is the simplest, safest, and least liable to recurrence.

3. Recurrence frequently results from failure to stitch the edges of the everted tunica vaginalis.

4. Andrews' bottle operation is a failure; its adoption accounts for a large proportion of the recurrences.

5. Excision is preferable to eversion in the rare cases of chronic pachyvaginitis.

6. Excision of the unopened hydrocele is the only complete method of removing the entire excreting surface.

7. Of the numerous objections made by conservatives to the radical treatment, none resists either a thorough clinical or experimental test.

8. The protective rôle of the tunica vaginalis has been overestimated.

9. Under strictly aseptic conditions experimental eversion of the tunic is not followed by atrophy of the testicle; it may produce a mild peritesticular sclerosis.

LOUIS GROSS.

Eccles, W. M.: Ectopia Testis. *Clin. J.*, 1913, xlii, 241.

By Surg., Gynec. & Obst.

The author names five positions in ectopia testis: Perineal, femoral, superficial inguinal, cruro-scrotal, and prepenial.

As etiology, he mentions "the pull of the lateral fibers of the gubernaculum attached to spots away from the normal, and the push of an advancing hernia."

The most common position is between the anus and the tuber ischii. The ectopia testis is not necessarily an imperfect organ; in the perineum it may be fairly well developed and quite capable of producing spermatozoa. In other positions, however, it is generally imperfect.

As treatment, Eccles mentions transplantation wherever feasible. This is usually possible when the ectopia is situated on the perineum. When the ectopia testis is improperly developed, it is usually accompanied by a hernia, and should best be removed.

Ectopia testis is subject to inflammation which, particularly in the perineum, may be either traumatic or infectious. Inflammation in the perineum may simulate an ischio-rectal abscess. When ectopia testis is associated with a hernia, an operation is always advisable, particularly for the hernia. The testis may become the site of a new growth.

Stevens, A. R.: On the Value of Cauterization by the High Frequency Current in Certain Cases of Prostatic Obstruction. *N. Y. M. J.*, 1913, xcvi, 170. By Surg., Gynec. & Obst.

Stevens reports two cases in which he successfully applied Beer's suggestion of cauterizing by the high frequency current for the relief of prostatic obstruction.

One case of contracture of the vesical neck with twenty-six ounces of residual urine and nocturnal enuresis was cauterized six times by means of the Oudin current for a total of eighteen minutes. The residual urine was reduced to one and a half ounces. In a case of middle-lobe prostatic obstruction, with fourteen ounces of residual urine, the Oudin current was applied six times for a total of nine and one half minutes. The residual urine was reduced to a half ounce. The treatments were tolerated so well that no anæsthetic was used. Moreover, they did not interfere with the patients' business and were not followed by pain or serious bleeding.

Cauterization by high frequency current is not suitable for large prostates but will probably prove efficient for constriction of the vesical neck and for median bars or lobes and single lobes that project into the bladder or urethra from any other portion of the prostate.

J. B. CARNETT.

Gebele: Carcinoma of the Prostate (Über das Prostatacarcinom). *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvi, 579.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Carcinoma of the prostate is a relatively frequent disease. Macroscopically a carcinomatous prostate is frequently abnormally small; at other times the infiltrated tissue comprises a tumor that fills the entire pelvis. Its consistency is usually hard. Its surface may be nodular or smooth. The tumor is usually an adenocarcinoma; more rarely it is scirrhous. In most instances it is primary in the prostate. Secondary tumors are found most commonly after gastric tumors.

The so-called osteoplastic carcinoma of the prostate consists of small nodules, hard and primary in the organ, with numerous metastases in the form of diffuse infiltration in different bones. The bones of the pelvis, the lower portion of the spine, and the bones of the lower extremity are most commonly involved. Prostatic hypertrophy seems to predispose to carcinoma. The early diagnosis can be only probable. If a small, hard prostate is palpable per rectum, carcinoma must be suspected. The other symptoms are variable. The prognosis is unfavorable. Advanced cases can be treated

only symptomatically or a palliative operation may be performed. Some authors do not deem a radical removal advisable even in the early stage. The methods of operation are variable: suprapubic, perineal, or combined. In case the bladder and seminal vesicals are involved the author advises the method of Völcker: ischio-rectal incision with the patient in the abdominal position. The statistics of the operative results are bad. As permanent results are reported continually, however, the attempt may be made to effect a radical removal of the carcinoma unless the case is far advanced.

DENCKS.

Willian, R. J.: Carcinoma of the Prostate Gland. *Brit. M. J.*, 1913, ii, 60. By Surg., Gynec. & Obst.

The author quotes Albarran's statistics as proving that 14 per cent of all prostates removed by operation show malignancy, and Young as saying that 21 per cent of all enlarged prostates are malignant. As a basis for his paper, Willian has collected notes on 33 cases of carcinoma of the prostate. He does not state how many, if any, of the series were operated upon. He advises operation for the actual diagnosis of carcinoma. If carcinoma is present, radical cure probably cannot be effected by operation. The author's summary reviews the paper:

1. The average duration between the onset of symptoms and the time that the patient saw the surgeon was fourteen and one half months.

2. The average age was 61.

3. The onset symptom was nocturnally increased frequency of micturition in 40 per cent, and gradual obstruction of micturition in 30 per cent of the cases.

4. Pain was variable and not characteristic.

5. Urinary obstruction was a marked feature; 72 per cent had complete retention, and a further 24 per cent, partial retention.

6. Hæmaturia was not common: probably 82 per cent did not show blood.

7. On rectal examination, 70 per cent showed hard nodules with fixity of the gland.

8. The average duration of the disease from the onset of the symptoms to death was 28 months.

9. Young's statistics that 20 per cent of removed prostates show a malignant tendency cannot be ignored. If these figures are accepted, it is the surgeon's duty to remove the gland by operation as soon as it begins to cause symptoms. The risks of the operation are at that time smaller than the risks after malignancy has developed.

10. The treatment recommended when a diagnosis of carcinoma has been made is as follows:

(a) In the absence of residual urine, give a urinary antiseptic, with opium for the pain when necessary.
(b) If there is residual urine, begin catheter life, using a large-sized hard catheter; give a urinary antiseptic, with opium if necessary.

(c) If there is obstruction, or if catheter life is intolerable, establish a permanent suprapubic drainage.

M. S. HENDERSON.

Wallace, C.: Some Conditions Simulating Prostatic Hypertrophy. *Clin. J.*, 1913, xlii, 209.

By Surg., Gynec. & Obst.

The author reports six cases which simulated prostatic hypertrophy but proved not to be.

One interesting case was that of a small projection which on removal brought with it a strand of mucous membrane and fibrous tissue from the posterior urethral wall. The strand contained several minute adenomata.

The second case was operated upon but no enlargement was found. The bladder was drained and eventually allowed to close, without any resulting benefit. Then, although it was considered to be a case of secondary atony, the bladder was reopened and a wedge-shaped portion of normal prostate was removed. The apex of the wedge lay about half an inch behind the urethra, and the base corresponded to the posterior wall of the urethra above the ejaculatory ducts. That normal micturition was restored indicated to Wallace that the symptoms were due to an anatomical defect.

The author claims that in cases of this kind micturition is obstructed not by a bar but by a bending of the urethra within the prostate. A diagnosis of "vesical prostatism" should be made with great reserve.

Conclusions: (1) That many cases present symptoms which at first might reasonably be considered to be caused by prostatic hypertrophy, but which subsequent examination will prove to be due to other causes; (2) that prostatic enlargement can be excluded only by a bimanual examination through the opened bladder; (3) that even when a bimanual examination proves that there is no enlargement the cause of the errors of micturition may still lie within the prostate; (4) that no error of micturition should be assigned to a failure of nerve or muscle until all mechanical defects have been excluded; (5) that at least in some cases, the cause of difficult micturition is a bending of the prostatic urethra, and the patient can be cured by a simple operation.

LOUIS GROSS.

Hagner and Fuller: The Post-Operative Complications of Prostatectomy. *Surg., Gynec. & Obst.*, 1913, xvii, 110.

By Surg., Gynec. & Obst.

A study of the post-operative complications offers a field of instruction to the surgeon for his future benefit. The important complication is hæmorrhage, usually of venous origin. It occurs within forty-eight hours and is controlled by pressure with gauze soaked with adrenalin. The removal of the perineal drainage tube is facilitated by the use of oil and peroxide. If the bleeding is suprapubic, a catheter is passed through the urethra into the bladder. The bladder end of the catheter has a knot of gauze which serves as a plug. It can be easily removed by passing a suture through the bladder end of the catheter and carrying it out through the suprapubic wound.

Thrombosis, especially of the pulmonary vessels,

is an infrequent complication. Sudden death may, however, be due to this condition. As pneumonia has to be guarded against, great care should be exercised in administering the anæsthetic. The author uses nitrous oxide and oxygen at present. Sepsis occurs less frequently in the perineal operation due to better drainage. When sepsis does take place, good ample drainage and continuous irrigation is of inestimable value. The intravenous injection of salt solution and the use of vaccines are also of value.

The kidney function should be tested before operation if there are any signs of renal disease, using Geraghty's phenolsulphophthalein test. Pyelitis and uræmia must always be looked for in these cases. If present, one should use salt solution, sweating, and other appropriate measures. The prognosis in cases with diabetes is proverbially bad. A continuation of pyuria after operation is due to infected kidneys, a long-standing, pre-existing cystitis, or to diverticula. A thorough digital examination of the internal urethra should be made at the end of the operation to determine that no diverticula has been left, as this may necessitate a secondary operation. Post-operative urinary frequency is the result of a contracted bladder or loss of control.

The peritoneum should not be torn as it may lead to peritonitis. The rectum should be carefully watched as fistulæ follow when it is ruptured. For the same reason silk traction sutures are not used. The infection travels along the suture. The fistulæ are usually mild and readily yield to treatment.

No operation gives more relief to a patient than a properly performed prostatectomy; hence the importance of pre-operative and post-operative care of the patient. Cystoscopic examination should be made to ascertain what, if any, complications exist and the best way to operate.

Grinenko: Total Prostatectomy in the So-Called Prostatic Hypertrophy (Über die totale Prostatektomie bei der sogen. Prostatahypertrophie). *Disser-tation*, St. Petersburg, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author conducted investigations on the cadaver to determine whether the prostate had a capsule of its own which would make complete enucleation possible. It was found that the gland possesses only one layer of fascia, which is smooth on the external surface posteriorly only and rough on the other surfaces of the gland. This fascial covering can be separated from the gland easily on the posterior surface, with the exception of the median part, and also on the sides. On the anterior surface it can be separated only with difficulty. A continuation of the fascia to the apex and to the base of the gland was not demonstrated and it was impossible to isolate a distinct capsule. The capsule described by other authors must be considered as a part of the pelvic fascia which invests the entire gland with the exception of the base and apex.

The division of the prostate into distinct lobes is not justified from an anatomical point of view. To determine whether a gradual increase in size of the gland takes place with advancing age, the author examined the prostates of sixty male cadavers between the ages of 40 and 90 years and arranged them into groups according to age. It was found that the size of the gland increases only a trifle with advancing years. On the strength of thirty-two cases examined, he comes to the conclusion that prostatic hypertrophy is a tumor formation (adenoma) of the glandular tissue. The principal changes occur in the central part of the gland, directly under the urethral mucosa. The author then offers microscopical proof of his contention. From the clinical standpoint his views are reinforced by the progressive character of the disease, by the occurrence of malignant degeneration and by the possibility of recurrence.

The author offers further evidence that these adenomas originate in the periurethral glands. Although the prostate grows in size it retains its normal contour; the enlargement is at the expense of the antero-posterior diameter. The glandular tissue of the prostate is divided by the smooth sphincter internus into a central and peripheral part of periurethral glands. With the enlargement of the periurethral glands the sphincter internus is forced backward. The peripheral zone is the true prostatic glandular tissue. The musculature of the prostate and the musculature of the pars prostatica urethræ are really inseparable, being practically one. On account of this musculature a close relation exists between the prostate and its surrounding structures.

As a result of his operative experience and investigations on the cadaver, the author comes to the conclusion that a complete extirpation of the prostate in the histological sense is impossible without causing a lesion of the pelvic fascia and ejaculatory ducts. The adenomatous enlargements of the prostate are much more accessible from the bladder than from the perineum. During a prostatectomy the entire gland is not enucleated but only its adenomatous part. In the living man a large part of the gland remains intact which may be considered as the surgical capsule and which prevents the opening of the preprostatic venous plexus and of the pelvic connective tissue. Experience teaches further that in view of the close relationship of the urethral mucosa to adenomatous tissue, a part of the former is sacrificed at the prostatectomy. The ejaculatory ducts as a rule remain intact during the removal of the adenomatous masses. The author prefers the transvesical route to the perineal for the following reasons: Technically the operation is easier; hæmorrhage is less; thorough drainage from the wound is obtained; and in infected cases and in old individuals the operation may be performed in two steps. Above all, the excellent results obtained by it favor the suprapubic route. An extensive bibliography and four microphotographs are appended.

HESSE.

Moore: Prostatectomy in the Aged. *Interst. M. J.*, 1913, xx, 648.
By Surg., Gynec. & Obst.

The author submitted a series of questions to the genito-urinary surgeons in this country and abroad with reference to their experience in prostatectomy in the aged. From the answers received he compiles the following:

Twenty surgeons reporting successful perineal prostatectomies gave the highest age of their patients as ranging from sixty-three to eighty-nine years. Twelve had operated successfully on men over eighty, reporting, in all, thirty cases between eighty and ninety.

Eighteen surgeons reported successful suprapubic operations upon patients whose ages were from sixty-six to ninety. Thirteen of these had operated successfully upon men over eighty, reporting fourteen cases.

Of the twenty-five surgeons who expressed an opinion, all but five were in favor of prostatectomy in the aged where general conditions are satisfactory and local conditions indicate an operation.

The mortality of less than two per cent following prostatectomy, in the absence of serious complications, is contrasted with a death rate of over five per cent for enlarged prostate treated by catheterization.

The author reports two cases of perineal prostatectomy in patients ninety years of age, in which his results were prompt and satisfactory. He concludes that catheter treatment of enlarged prostates is unsurgical and unsafe; that prostatectomy is the best treatment; that it is nearly as safe in the very aged as in younger men; and that it is the consensus of opinion that age is no bar to prostatectomy and the operation should therefore be performed whenever practicable.

THOMAS C. HALLOWAY.

MISCELLANEOUS

Pfister: Urolithiasis and Bilharziasis (Urolithiasis und Bilharziasis). *Arch. f. Schiffs- u. Tropenhyg.*, 1913, xvii, 309.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Until now the views held in regard to the direct relations between bilharziasis and the frequent occurrence of stone in the urinary passages have been divided; one group of men maintaining that all stones in the urinary passages are due to bilharziasis, and the other group maintaining that the increased amount of mineral matter in the water of the Nile during the summer is responsible. The fact remains, however, that those investigators who examined a large number of stones found bilharzia eggs in their centers much more rarely than was expected.

Pfister calls attention to the fact that frequently little nodules are found in the center of stones. These nodules are the result of drying and calcification of the fluid present in the small cystic bodies found in cystic cystitis of bilharziasis. Furthermore, these little nodules found in the so-called

"sandy bladder" are the result of calcification of little ulcers resulting from penetration of these little eggs into the bladder. Therefore we must also consider stones containing such little nodules as due to bilharziasis. In thirty stones carefully examined along modern lines, Pfister found bilharzia eggs only three times positively; in three instances bilharzia eggs were probably present. Other interesting points are discussed, tending to show that in Egypt a bilharzia infection predisposes to stone formation.

RUBRITIUS.

Freund, E.: Experiences with Arthigon in Complications of Gonorrhœa (Erfahrungen mit Arthigon bei den Komplikationen der Gonorrhœa). *Wien. med. Wchnschr.*, 1913, lxiii, 1550.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author treated 23 cases of acute gonorrhœal epididymitis with injections of 0.5 gm. of arthigon and obtained good results in 21 cases. In one case of chronic epididymitis four injections had no effect. Seven cases of acute prostatitis were promptly cured. In five cases of chronic prostatitis and three of anterior gonorrhœal urethritis the injections gave no results. One case of posterior gonorrhœal urethritis and lymphangitis was considerably improved by two injections. Also two cases of gonorrhœal arthritis were influenced favorably. Forty-two cases were treated in all.

Freund's conclusions are as follows: 1. Arthigon is a specific remedy of great diagnostic value in doubtful cases. 2. It is perfectly harmless. 3. It is of great therapeutic value in acute gonorrhœal epididymitis, acute gonorrhœal arthritis, and sometimes in acute gonorrhœal prostatitis. Especially in epididymitis the vaccine therapy is superior to all other known methods and remedies, because it relieves the patient immediately and shortens the time of treatment for the entire gonorrhœal affection. According to the recommendations of Bruck, Freund treated only those cases in which there was no fever. Numerous other authors have reported favorable results with this therapy. MAGENAU.

Kolischer, G.: Mid-Operative Diagnosis in Urologic Operations. *J. Am. M. Ass.*, 1913, lxi, 174.
By Surg., Gynec. & Obst.

The object of this paper is to emphasize the importance of mid-operative diagnosis in urological operations after the organ has been exposed, and the fact that operative procedures must often be adjusted to the conditions discovered.

In most instances of external urethrotomy it is impossible to decide definitely whether to perform a mere splitting operation or to resect until the urethra is exposed.

In Hagner's epididymotomy the location and the extent of the depleting incisions cannot be decided

upon until the testicle and its appendages have been fully exposed to view and a palpatory examination has been made. The same holds good for tuberculosis involving the epididymis.

In suprapubic prostatectomy the macroscopic differential diagnosis between simple hypertrophy and cancer, and between hypertrophy and an œdema of the prostate, cannot be made until the bladder is opened.

In cases of extensive tumors of the bladder, especially those in which the tumors are near the base of the viscus, and in which extensive resection or a complete extirpation of the bladder is contemplated, these questions can be decided best by exposing the bladder, digging it out of its surroundings without opening it, and in this way making it accessible for immediate palpatory examination.

In kidney surgery the mid-operative diagnosis is of great help. Unusually free hæmorrhage in the approximating incision will call the attention of the operator to the presence of adhesions and the possibility that the causative inflammation has involved the peritoneum and glued it to the kidney. The operator should therefore use extreme caution not to break into the serosa. Any œdema discovered surrounding the ureter on its course down to the bladder is as a rule of mechanical origin and indicates that the ureter is kinked. The ureter, therefore, will have to be exposed and the obstruction removed before its patency can be re-established.

Bimanual palpation of the exposed kidney will in certain cases furnish information which is absolutely decisive as to the choice between nephrectomy and nephrotomy. This decision can be made before the kidney is opened. For instance, in coli or streptococci infections of the kidney involving a small area, especially those located in the neighborhood of the pelvis, the chance of cure by drainage is good. On the contrary, if palpation of an enlarged kidney infected by the colon or the streptococcus bacillus reveals the presence of numerous sclerosed spots and a number of softened areas, an extensive hard infiltration of the renal parenchyma, or a fluctuating sac, the kidney should be removed unopened.

In cases of renal concretions a combined palpation of the exposed kidney will be of great advantage. After splitting open the renal pelvis it will enable the surgeon to explore the calices and locate concretions higher up in the parenchyma and will also facilitate the sounding of the ureters.

In perineal suppurations the mid-operative diagnosis will influence the diagnosis between an infected perineal hæmatoma or a superficially infected focus in the surface of the kidney.

In conclusion the author covers some of the most important points in which mid-operative diagnosis will show its value in urological work.

THEO. DROZDOWITZ.

SURGERY OF THE EYE AND EAR

EYE

Ohlemann: Severe Injuries to the Eyes and Face by So-Called Water-Core and Zodiac Golf Balls; Methylalcohol and Golf Balls (Augen- und Gesichtsverletzungen schwerer Art durch sogenannte Water Core- und Zodiac-Golfbälle oder Methylalkohol und Golfbälle). *Klin. therap. Wchnschr.*, 1913, xx, 604.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author points out the fact that the rubber core in the above-mentioned golf balls is replaced by a cheap fluid or cement-like, sour or alkaline reacting mass which is under high pressure, and the chemical composition of which is a trade secret. If a ball of this kind is opened in any way, its contents explode violently and injure the hands, face, and clothing of the bystanders just as would any corrosive fluid. Two hours later the eyeballs are greatly swollen, and reddened, the conjunctiva of the lids as well as the bulb is converted into a dirty grey mass and the cornea, with the exception of its upper part, becomes opaque and milky. There is marked chemosis and diminished vision. After two weeks iridocyclitis with hypopyon and necrosis develops in the lower quarter or third of the cornea, which is covered with superficial blebs. The episcleral tissue later becomes pale, scarred, and densely opaque. In eyes injured by zodiac balls, the cornea becomes clearer after the use of dionine, atropine, holocaine, and subconjunctival injections of physiological salt solutions. This is not the case in eyes struck by the water-core balls. In the latter the opacities of the cornea are permanent. Because the extremely dangerous methylalcohol has so often been smuggled in under another name in spite of the law, the author assumes justly that the balls mentioned, which are produced in America, may be introduced into Germany. He therefore warns against the use of them.

VON SAAR.

Stephenson, S.: Some Remarks upon the Diagnosis and Treatment of Lacrimal Affections. *Clin. J.*, 1913, xlii, 252. By Surg., Gynec. & Obst.

Stephenson says that we do not now at once assume that a watery eye is the result of an organic stricture, as was at one time the case. A surgeon eliminates such causes of epiphora as a displaced or occluded punctum or a chronic nasal catarrh. If no obvious cause is found, fluorescein is dropped into the conjunctival sac to see if it will pass into the nose. Treatment of the conjunctival sac and nose should be carried on for several weeks, and if this fails, a lacrimal syringe may be used. Even if fluid does not pass through at the first few trials it is probable that this plan will succeed *if the condition has not been treated by probing.*

Stephenson warns of the danger of using argyrol or protargol under pressure. If the syringe is of no avail, use may then be made of the probe, or the sac may be extirpated, or Toti's operation may be performed. A discussion of these measures follows.

C. G. DARLING.

Stephenson, S.: Clinical Lecture on the Treatment of Glaucoma, with Particular Reference to the Newer Operations. *Med. Press & Circ.*, 1913, xcvi, 58. By Surg., Gynec. & Obst.

Stephenson takes up the treatment of glaucoma under three headings: (a) first aid; (b) surgical aid; (c) palliative treatment. Under first aid he discusses subconjunctival injection of sodium-citrate, posterior sclerotomy, pilocarpine, and dionin. Under surgical treatment he discusses iridectomy and its modifications, Lagrange's, Elliot's, Heine's, Heine-Fergus', Bettremieux's, the Thread, Herbert's and Holth's operations in detail. He does not think that palliative treatment should be long continued.

C. G. DARLING.

Frenkel, H.: Capillary Angioma of the Retina. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 268.

By Surg., Gynec. & Obst.

Frenkel reports a case of his own of capillary angioma of the retina, and reviews the similar cases which have been published.

In reviewing his own case he says: "The question is that of the origin of capillary angioma of the retina characterized by the occurrence in locations more or less distant from the papilla of little spots, bright in this instance, in the place where the retinal capillaries are presumed to be. These little spots are situated between an afferent and an efferent vessel. Gradually they increase in size and at the same time the vessels between which they occur become more apparent. Then we can perceive that as the bodies become larger there is a corresponding exaggerated development of the arteries and veins which are dilated, turgescient, tortuous. At this stage we can see more than two vessels abutting upon the same body even as two bodies may communicate by intermediary dilated vessels.

"This affection begins very insidiously, provoking at first subjective troubles — a sensation of smoke before the eyes, mist, muscæ volitantes and, finally, at the end of several months or maybe a year, a lowering of visual acuity. Objective scotomata have been noted at the periphery of the visual field, it is true with some difficulty. In one case they developed simultaneously in the two eyes.

"As antecedents, we find a sister blind in both eyes at the age of 15 and 18 years. The patient's

affection began after his military service, at the age of about 23 or 24 years.

"The ophthalmoscopic appearance at this stage of the disease is very characteristic and is similar to figures of analogous cases published in ophthalmic literature."

C. G. DARLING.

Verhoeff, F. H.: Parinaud's Conjunctivitis; A Mycotic Disease Due to a Hitherto Undescribed Filamentous Organism. *Arch. Ophth.*, 1913, xlii, 345. By Surg., Gynec. & Obst.

The findings reported in this article are well given in the conclusion: "In eleven out of twelve consecutive cases, each having the clinical features described by Parinaud and each presenting essentially the same characteristic histological picture, a minute filamentous micro-organism was found. The absence of any other demonstrable micro-organisms in the lesions, the unusual character of the micro-organisms found, their great abundance and the fact that they were so situated as to explain the lesions, leave no reasonable doubt that they were the cause of the disease. Their occurrence in the areas of cell necrosis previously pointed out by me confirms the diagnostic importance of these areas."

The clinical findings in all the cases consisted of conjunctival granulations with smaller or larger white areas on their surfaces and the enlargement of the pre-auricular lymphatic gland. Histologically in all of these cases focal areas infiltrated with endothelial phagocytes in various stages of necrosis were found. These cells were discrete in arrangement. There were few lymphoid and plasma cells and almost no pus cells. The organism was made visible by staining with a modified Gram stain which is described in the article. EARLE B. FOWLER.

Hirsch, C.: Sympathetic Nystagmus in Erysipelas (Sympathischer Nystagmus bei Erysipel). *Deutsche med. Wchnschr.*, 1913, xxxix, 315. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Spontaneous nystagmus, mostly horizontally rotatory, with eyes directed laterally or up and down is an almost constant symptom of facial and cranial erysipelas. The vestibular apparatus itself is not injured. This phenomenon may be of great importance in the differential diagnosis. VON RAD.

Vail: Cerebral Localization from the Standpoint of the Oculist. *Lancet-Clinic*, 1913, cx, 60. By Surg., Gynec. & Obst.

Ninety per cent of brain cases present definite eye symptoms, and these are of value in localization when studied in connection with other symptoms. Of the symptoms most often found, those considered are:

- (a) Conjugate paralysis and conjugate spasm of the muscles.
- (b) Pseudo-nystagmus and nystagmus.
- (c) Strabismus and disjunctive movements of the eyes.
- (d) The pupils.

(e) The fields of vision, ocular and mind blindness.

(f) Optic neuritis.

The author takes up each group and discusses its significance with special emphasis on brain tumor localization.

EARLE B. FOWLER.

EAR

Guillemin, M.: A Contribution to the Pathogenesis and Treatment of Pharyngeal Collections of Otitic Origin (Contribution à la pathogénie et au traitement des collections pharyngiennes d'origine otique). *Thèse de Nancy*, 1913, July. By Journal de Chirurgie.

Retro- and lateropharyngeal abscesses following otitis are quite rare. They are generally considered very serious. In 19 cases collected by Collinet in 1895 there were 8 deaths.

Guillemin reports two very interesting cases of retro-pharyngeal abscess of otitic origin that were cured, and he attempts to show that, contrary to current opinion, this termination to otic suppuration is favorable.

The most interesting chapter of his work is that which deals with the pathogenesis. Guillemin does not speak of adeno-phlegmons. He studies only the abscesses of otitic origin that are accessible to view and exploration.

Otitic infection may spread to the retro-pharyngeal cellular tissue by three routes: 1. By way of the bones. The pus gains the sub-labyrinthine group of the mastoid cells and thus arrives at the extreme point of the temporal bone. It then reaches either the anterior lacerated foramen on the interior of the lateral aponeurosis of the pharynx or the ante-labyrinthine group which extends along the Eustachian tube. Also the pus may follow the groove in the mantle of the brain and reach the peritubal and peripharyngeal cellular tissue.

2. By the endocranial route. The pus collected secondarily upon one of the two endocranial sides of the temporal bone may spread from behind towards the anterior lacerated foramen, the occipital passage, or the anterior condylar passage, this being the common route in sinuso-digastric mastoiditis with suboccipital, subpetrous, and pharyngeal tracts.

3. By the exocranial route. The pus, after spontaneous trepanation of the cavity or of the antrum, gains the base of the skull where it follows the stylo-pharyngeal aponeurosis and thus reaches the lateral side of the pharynx.

On the basis of his theory that latero-pharyngeal abscess in the course of otic suppuration is a favorable symptom leading to rapid cure, Guillemin asks if it would not be permissible in cases of prolonged suppuration of the base of the brain to favor drainage of the suboccipital pus toward the pharynx. This may be accomplished by opening for it carefully a route following the condylar canal intermediate to the external side of the occipital condyl.

L. SENCERT.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Keyle: The Nasal Septum and Its Relationship to the Syndrome of Sphenopalatine Ganglion Neurosis. *Interst. M. J.*, 1913, xx, 651.

By Surg., Gynec. & Obst.

With irritation of the complicated nervous mechanism of the attic of the nose the impressions are easily carried by way of the trifacial nerve to the nuclei of the facial and vagus nerves in the medulla. The result of irritation of the motor, sensory and sympathetic nerve fibers is far reaching, and nutritive or cardiovascular changes are to be expected. Some of the symptoms are: constriction, mental apathy, a feeling of fullness in the attic of the nose, sometimes nausea, and skin manifestations characteristic of a pronounced vasomotor disturbance. Asthenopia, migraine, or pain in the temple or eyeball may be experienced.

Submucous resection of a deflected septum is the first operative procedure, to be followed by operative treatment of the middle turbinated body or sinuses only if necessary.

The author also describes the sensory nerve supply of the nose and advocates local anæsthesia by the injection of 1 per cent cocaine solution along the course of these nerves.

EARLE B. FOWLER.

Klestadt: Surgery of the Nasal Sinuses (*Die Chirurgie der Nebenhöhlen der Nase*). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 138.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The monograph considers the literature of the last three years in reference to the progress made in the pathology and therapy of the diseases of the nasal sinuses. Onodis investigated the variations of the frontal sinus of 1200 skulls. In 5 per cent he found a bilateral absence, in 1 per cent a unilateral absence of this sinus. After a short discussion of foreign bodies and injuries of the sinuses he goes into detail in regard to the antra. Etiologically infectious diseases are important; the rhinogenous genesis, however, is the most frequent. Acute rhinitis is the most frequent source of infection. Diseases of the teeth also enter into consideration in maxillary sinus infections. Pathologically acute and chronic inflammations of the antra do not differ from other mucous membrane inflammations. For the diagnosis exploratory irrigations are of extreme importance and are discussed in detail. Exploratory puncture of the antrum from the alveolar process should be performed only in dental empyemas. In the other cases punctures should be made from the middle nasal cavity, being more easily performed in this way than from the inferior cavity. Irrigation of the frontal sinus is relatively easy by means of Killian's long speculum with which the middle tur-

binate can be lifted. All force is to be avoided on account of the danger of injuring the lamina cribrosa. Transillumination is applicable only to the antrum. Radiography has been extensively employed, especially in doubtful cases in children and in the unconscious. Clinically the inflammations of the antra have been divided into simple and complicated. Facial, oculo-orbital, and intracranial complications have been studied thoroughly in the last few years. Van der Hoeve's symptom, enlargement of the blind spot of the eye, is of importance in diseases of the posterior ethmoidal cells and of the sphenoidal sinus. This symptom, however, is not constant according to Markbreiter's investigations.

In regard to the treatment of inflammations of the antra the author emphasizes that radical extranasal operations should be performed only after unsuccessful purely conservative means and the lesser endonasal procedures. By these measures patients with antrum infections can almost certainly be cured, and the majority of those with frontal and sphenoidal sinus infections as well. In combinations of the two and in ethmoidal sinus suppurations the prognosis must be guarded. Excellent results are obtained with the radical operation of Caldwell-Luc in antrum suppurations. According to Bönnighaus almost 100 per cent of cures are obtained. The endonasal radical operation on the ethmoidal cells frequently cannot be performed in one session. Many times a cure is obtained only after several attempts. The extranasal operation is to be performed if the endonasal operation results in no improvement and in the presence of cerebral complications. The same applies to the radical operation on the sphenoidal sinus. The radical operation on the frontal sinus is best performed according to Killian's method. According to Bönnighaus's statistics (211 cases), a cure is obtained in 91 per cent of the operation. The mortality is 2 per cent. All sinus operations may be performed under local anæsthesia according to the method of Braunsch, although general anæsthesia is frequently necessary. In conclusion the author discusses other rare specific infections and other diseases of the sinuses of importance in the differential diagnosis, such as osteomyelitis, cysts of the superior maxilla, mucocèles, and blastomas.

KAHLER.

Mithoeffer. Alcohol Injections into the Superior Laryngeal Nerve in Tuberculous Laryngitis. *Ohio St. M. J.*, 1913, ix, 315.

By Surg., Gynec. & Obst.

Alcohol injections are a valuable adjunct in the palliative treatment of tuberculosis of the larynx, especially that form of the disease in which great

involvement of the superior orifice of the larynx exists—the aryteno-epiglottic type. The presence of a painful spot located at a point where the internal branch of the superior laryngeal nerve pierces the thyrohyoid membrane is a positive indication.

The technique is simple. The needle (one not too sharp) is inserted $1\frac{1}{2}$ cm. over the painful spot. The direction of the needle is then turned upward and outward toward the ear and fifteen to thirty drops of 80 per cent alcohol (warm) are injected.

EARLE B. FOWLER.

Masland: Antral Empyema, with the Presentation of an Efficient Conservative Operation for Its Cure. *N. Y. M. J.*, 1913, xcvi, 190.

By Surg., Gynec. & Obst.

In treatment of inflammation of the antrum after the formation of pus, it is necessary to establish good drainage and to afford an easy means of irrigation. This the author does by drilling through the nasal wall at the floor of the nose, using a straight drill, and inserting a permanent cannula about 4 cm. long. The irrigation may be carried out by the patient inserting the end of an all-rubber ear syringe into the mouth of the cannula. EARLE B. FOWLER.

Murphy: Use of Palate Mucous Membrane Flaps in Ankylosis of the Jaw Due to Cicatricial Formations in the Cheek. *J. Am. M. Ass.*, 1913, lxi, 245.

By Surg., Gynec. & Obst.

The author reports two cases in which this original method was successfully used. The flaps were of mucosa and pedicled, and obtained from the palate or floor of the mouth. On examination the first case showed complete immobility and no pain or tenderness on pressure over the joint. The roöntgenogram showed that there was no bony ankylosis. Through an external incision the jaw bones and articulation were exposed and a fibrous extra-articular ankylosis was demonstrated. What remained of the alveolar processes were removed and when the attachment of the temporal muscle was divided the jaw dropped.

A tongue-shaped pedicled flap was dissected from the palate, the base of the flap being toward the back of the mouth, the inner limb of the incision being about a quarter of an inch shorter than the outer. When this was reflected outward to cover the bone of the upper jaw, which was denuded by the chiseling, there was no contraction which might interfere with the circulation of the flap. The sides were sutured with very fine catgut to the margins of the gums and the tip was anchored to the cheek; a small pledget of antiseptic gauze was placed between the jaws. The

mucous membrane of the cheek was carefully approximated with fine catgut and the skin incision closed with horsehair. The wound was dusted with bismuth sub-iodid powder and plain sterile gauze applied. A wedge of folded gauze was placed between the teeth, which was within a week replaced by a wooden wedge, with which the patient spread the jaws. Four weeks after the operation she was able to open her mouth about an inch without assistance. Four months later the patient wrote that she could open her mouth about an inch and a half.

In the second case the cicatricial tissue was carefully divided and two tongue-shaped flaps interposed, one obtained from the floor of the mouth and the other from the palate. Both flaps were about two and one half inches in length and from one half to one inch in width. The result of the operation was entirely satisfactory. The patient left the hospital in five weeks and was able to open his mouth unassisted about an inch. H. A. POTTS.

Skilern, P. G., Jr.: Infiltration of the Lingual Nerve for Operations upon the Tongue and for the Relief of Pain in Inoperable Carcinoma. *Surg., Gynec. & Obst.*, 1913, xvii, 114.

By Surg., Gynec. & Obst.

Confronted with an ulcer of questionable malignancy in the anterior two thirds of the tongue, in which excision was indicated, it occurred to the author to induce anæsthesia by infiltration of the lingual nerve instead of by the more painful intra-lingual injections. The nerve was reached one half inch below and behind the third molar tooth, where it crosses a line projected between that tooth and the angle of the mandible. Submucous injection of 4 cc. of 2 per cent novocain and adrenalin, 1:3000, induced anæsthesia in the anterior two thirds of the tongue within five minutes. Neither the excision of the ulcer nor the Paquelin cautery were felt. A second patient had inoperable carcinoma with chronic pain. Injection at the same site of 1 cc. of 2 per cent novocain and adrenalin, 1:3000, in 4 cc. of 70 per cent alcohol induced analgesia in ten minutes. The following night the patient slept more soundly than he had slept for two months. In bilateral injections the tongue loses its power of determining temperature, so the patient should be warned to test the temperature of his food with his lips. Infiltration of the mandibular nerve is warranted only where growth or the absorption of the alveolar process after the shedding of the third molar tooth, has destroyed the landmarks of the lingual nerve.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

The treatment of granulating wounds. H. BERGEAT. München. med. Wchnschr., 1913, lx, 1377.

Some points in, and reflection on, surgical technique. G. S. THOMPSON. South African M. Rec., 1913, xi, 306.

Experiences with Pfannenstiel's method of treating wounds in non-tuberculous affections. A. REUTERSKIÖLD. Hygiea, Stockholm, 1913, lxxv, 434.

Aseptic and Antiseptic Surgery

Inquiry concerning the preparation of the field of operation. CRILE, FRAZIER, COLMERS, HALSTEAD and OCHSNER. Med. Klin., Berl., 1913, ix, No. 28.

Researches on the theory of disinfection. EISENBERG and OKOSLKA. Zentralbl. f. Bakteriöl., 1913, lxix, 312.

Sublimate in surgery. MARQUIS. Rev. de chir., Par., 1913, xxxiii, No. 7.

Critical comment on the value of Grossich's method and a contribution toward the simplification of our methods of disinfection. W. MERKENS. Deutsche med. Wchnschr., 1913, xxix, 1249.

Anæsthetics

Anæsthesia; a monograph. BEHAN and FRENZEL. Med. Fortnight., 1913, xlv, 298.

A review of about 650 anæsthesias. E. L. KING. N. Orl. M. & S. J., 1913, lxvi, 48.

A few practical points in anæsthesia. B. PALMER. Iowa M. J., 1913, xx, 13.

Selection of the narcotic in operations for acute inflammatory processes in the abdominal cavity. SPRENGEL. Arch. f. klin. Chir., 1913, ci, No. 4.

Hints on the administration of chloroform. B. HIGHAM. Indian M. Gaz., 1913, xlviii, 256.

The use of heated ether vapor as an anæsthetic. H. E. NELSON. N. Orl. M. & S. J., 1913, lxvi, 57.

Intratracheal ether anæsthesia. KRUSKAL. Surg., Gynec. & Obst., 1913, xvii, 117.

Intratracheal insufflation anæsthesia. S. T. POPE. Calif. St. J. Med., 1913, xi, 255.

Narcosis by intratracheal insufflation; employment of Auer and Meltzer's method in a case of thoracic surgery. EGIDI. Riv. osp., Roma, 1913, iii, No. 13.

Naso-tracheal anæsthesia; a new method applicable to operations on the mouth. S. ROBINSON. Clifton M. Bull., 1913, i, 39.

The relation between the oxidation products of ether and bronchial irritation following its use as an anæsthetic. R. B. SMITH. Med. Council, 1913, xviii, 261; and Therap. Monatsh., 1913, xxvii, 426.

Oxygen and anæsthesia. F. H. McMECHAN. Internat. J. Surg., 1913, xxvi, 205.

Experiences with anæstheticum novum. BUNGE. Deutsche zahnärztl. Wchnschr., 1913, xvi, 297.

Pantopon, pantopon-scopolamine and secacornin in the practice of the country physician. LIERTZ. Med. Klin., Berl., 1913, ix, No. 26.

Magnesium narcosis. SCHÜTZ. Wien. klin. Wchnschr., 1913, xxvi, 745.

Anæsthesia in genito-urinary operations. C. DRESSER. Mass. M. J., 1913, vii, 258.

Experimental study on the metabolism of carbohydrates during narcosis. F. OPPERMANN. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. v. Strümpell, 590.

The effect of narcosis on the metabolism of gas in the brain. F. ALEXANDER and S. CSERNA. Biochem. Ztschr., 1913, liii, 100.

Lesions of the cornea as a result of narcosis. SCHNAUDIGEL. München. med. Wchnschr., 1913, lx, No. 29.

A note on local anæsthesia. H. S. SOUTTAR. Brit. M. J., 1913, ii, 69.

Local anæsthesia, its scientific foundation and practical employment. H. BRAUN. Leipzig: Barth, 1913.

Local anæsthesia in oto-rhino-laryngology. UFFENORDE. Ztschr. f. Ohrenheilk. u. f. d. Krankh. d. Luftwege, Wiesb., 1913, xlviii, No. 4.

Spinal anæsthesia. S. D. JACOBSON. Am. J. Obst., N. Y., 1913, lxviii, 35.

Intravenous anæsthesia by means of hedonal. SIDORENKO. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, No. 3.

Paralysis of the phrenic nerve as a result of anæsthesia of the plexus. BRUNNER. Zentralbl. f. Chir., 1913, xl, No. 28.

Surgical Instruments and Apparatus

Gloves for use in operations under alcohol anæsthesia. WALZBERG. Zentralbl. f. Chir., 1913, xl, No. 26.

Apparatus for the production of pressure-narcosis. GERLACH. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 1 & 2.

A suggested improvement in the Allis ether inhaler. N. DU VAL BRECHT. N. Y. M. J., xcvi, 137.

Adhesive plaster as a direct dressing in the treatment of wounds, ulcers and infective conditions; its fulfillment of the Bier and Wright principles. M. B. HUTCHINS. J. Cutan. Dis., 1913, xxxi, 470.

A plaster of Paris scissors. ENGELMANN. Zentralbl. f. chir. u. mechan. Orthop., Berl., 1913, vii, No. 7.

A new needle-holder. BLUMENTHAL. Deutsche med. Wchnschr., 1913, xxxix, No. 28.

Continuous suction, and its application in post-operative treatment. KENYON. Surg., Gynec. & Obst., 1913, xvii, 115.

The Einhorn duodenal tube and its uses. S. K. SIMON. N. Orl. M. & S. J., 1913, lxvi, 42.

New instruments for the duodenum and the small intestine. EINHORN. Berl. klin. Wchnschr., 1913, I, No. 29.

The urethroscope—its importance in urethral pathology, diagnosis and treatment. S. ENGLANDER. Cleveland M. J., 1913, xii, 475.

A new bioröntgenographic apparatus. I. S. HIRSCH. N. Y. M. J., 1913, xcvi, 1.

A warm water supply for the operating room, with a simple arrangement of the wash basin. BECKER. Zentralbl. f. Chir., 1913, xl, No. 29.

The employment of spreading springs in the treatment of purulent processes. TIEGEL. Zentralbl. f. Chir., 1913, xl, No. 29.

SURGERY OF THE HEAD AND NECK

Head

Successful treatment of cancer of the face by simple puncture with ferrous oxide. H. SPUDE. Ztschr. f. Krebsforsch., 1913, xiii, 139. [498]

A case of plastic repair of the face for marked post-operative deformity and of canalization of the canal of Sténon because of a salivary fistula. MUSINI. Boll. d. sc. med., Bologna, 1913, lxxiv, No. 6.

Crossing of the spino-facial nerve in traumatic paralysis of the facial nerve. PONPONI. Policlin., Roma, 1913, xx, No. 29.

Treatment of facial neuralgia. BABINSKI. J. d. praticiens, Par., 1913, xxvii, No. 29.

Electrical treatment of neuralgia of the trigeminal nerve. ALBERT-WEILL. Paris méd., 1913, No. 33.

Tic douloureux; cure by injection of alcohol into the gasserian ganglion. KAUFMANN. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

Operative cure of a tumor of the gasserian ganglion. SACHS and BERG. Berl. klin. Wchnschr., 1913, I, No. 30.

Salivary calculi. EVANS and BOWEN. Iowa M. J., 1913, xx, 47.

Evacuation of diffuse and marked suppurations of the parotid gland. MORESTIN. Gaz. d. hôp., Par., 1913, lxxxvi, 86.

Osteoplastic repair of congenital and acquired defects of the inferior maxilla. GOBELL. Deutsche Ztschr. f. Chir., 1913, ccxiii, Nos. 1 and 2.

Treatment of fractures of the inferior maxilla according to the simplified method of Martin. SPUHLER. Arch. prov. de chir., Par., 1913, xxii, No. 5.

Ankylosis of jaw—interposition of flaps from mucosa of mouth. J. B. MURPHY. Surg. Clin. J. B. Murphy, 1913, ii, No. 3. [498]

The lumen of the maxillary sinus. L. GRÜNWALD. Anat. Hefte, 1913, xlviii, 267.

A bullet in the maxillary sinus. FALLAS. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

The cosmetic value of the radical operation on the frontal sinus after the method of Killian. NAVRATIL. Budapesti Orvosi Ujsag. Gégészet, 1913, xi, 3.

Facial paralysis in fractures of the petrous part of the temporal bone. DE STELLA. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

Treatment of fractures of the petrous part of the temporal bone. H. NIMIER and A. NIMIER. Rev. de chir., Par., 1913, xxxiii, No. 7.

Motor aphasia as the sole immediate effect of a cranial trauma. M. TÖBBER. Deutsche med. Wchnschr., 1913, xxxix, 1246.

A case of sub-acute psychosis following cranial trauma. F. UHLMANN. Psychiat.-neurol. Wchnschr., 1913, xv, 181.

A case of injury of the skull by a bullet from a fire-arm of small caliber which resulted fatally. MOUCERSKY. Voenno-med. J., St. Petersburg, 1913, ccxxxvii, July.

Reduction of the blood content in operations on the skull. RITTER. Arch. f. klin. Chir., 1913, ci, No. 4.

Plastic cranial surgery in old depression fractures. HOFMANN. Zentralbl. f. Chir., 1913, lx, No. 28.

Thirty heads in mesial section. R. H. WOODS. Med. Rec., 1913, lxxiv, 61.

The epidural space. HEILE. Arch. f. klin. Chir., 1913, ci, No. 4.

Right hemiplegia associated with aphasia caused by epidural hæmatoma resulting from an injury of the head; cured without intervention. EGIDI. Riv. osp., Roma, 1913, iii, No. 12.

The employment of autoplasmic transplantation of fat in defects of the dura and the brain. E. REHN. Arch. f. klin. Chir., 1913, ci, 962.

Thrombosis of the cavernous sinus in a nursing five months of age. EBERTLICH. München. med. Wchnschr., 1913, lx, No. 26.

Meningitis due to cysticercus which developed with the picture of basilar tuberculous meningitis. BITTORF. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlvii-xlviii, Festschr. v. Strümpell, 837.

Traumatic serous meningitis. SCHLECHT. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. v. Strümpell, 697.

Three cases of traumatic meningocele. ROCHER. J. de méd. de Bordeaux, 1913, xliii, No. 27.

Basilar speno-orbital meningocele. KONDRING. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, No. 2.

Double frontal sinusitis, serous meningitis; operation; recovery. E. J. BROWN. Med. Rev. Revs., 1913, xxix, 419.

Bacteriological study of a case of hæmorrhagic myelomalacia. G. A. RUECK. Med. Rec., 1913, lxxxiv, 146.

Secondary epidermization of myelomeningoceles. BONS-MANN. Virchow's Arch. f. path. Anat., etc., Berl., 1913, ccxiii, No. 1.

Traumatic epilepsy; a report of four cases following cerebral concussion; surgical treatment with recovery. T. KLINGMANN. Physician & Surg., 1913, xxxv, 296.

The treatment of (traumatic and non-traumatic) cortical epilepsy. RASUMOVSKY. Arch. f. klin. Chir., 1913, ci, No. 4.

Operative treatment of traumatic epilepsy. KOLACZEK. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlvii-xlviii, Festschr. v. Strümpell, 312.

Kocher's operation for traumatic and idiopathic epilepsy. A. SCHACHNER. Louisville Month. J., 1913, xx, 33.

Brain decompression operations. H. H. HINES. Lancet-Clin., 1913, cx, 65.

The albumin content of the cerebrospinal fluid; its albumin reaction in normal and pathological cases. A. ZALOZIECKI. Deutsche Ztschr. f. Nervenhe., Leipz., 1913, xlvii-xlviii, Festschr. v. Strümpell, 783.

Puncture of the corpus callosum. LENORMANT. Presse méd., Par., 1913, xxi, No. 61.

Cerebral tumors. O. TILMANN. *Verhandl. d. Gesellsch. deutsche Naturf. u. Ärzte*, 1913, ii, 120.

General symptoms and their value in the early diagnosis of cerebral tumors. LANDAU. *Przegl. lek.*, Warsaw, 1913, lii, Nos. 27 and 28.

An instructive false diagnosis in tumors of the brain. MÜLLER. *Deutsche Ztschr. f. Nerven.*, Leipzig, 1913, xlvii-xlviii, Festschr. v. Strümpell, 388.

Cerebral tumor caused or aggravated by trauma. KRAUSS. *Ztschr. f. Versicherungsmed.*, 1913, vi, 193.

Papillary stasis in cerebral tumors. TERRIEN. *Progrès méd.*, Par., 1913, xlv, No. 28.

Two cases of circulatory disturbances of the brain. C. E. RIGGS. *J. Am. M. Ass.*, 1913, lxi, 248.

Extraction of a bullet from the third ventricle of the brain. A. EXNER and J. P. KARPLUS. *Wien. klin. Wchnschr.*, 1913, xxvi, 1152.

Metastatic abscesses of the brain and their relations to hepato-pulmonary suppurations. COUTTEAUD. *Rev. de chir.*, Par., 1913, xxxiii, No. 7.

Symposium on brain surgery. R. INGRAM. *Lancet-Clin.*, 1913, cx, 58.

Conclusions drawn from a quarter century's work in brain surgery. ROSWELL PARK. *N. Y. St. J. Med.*, 1913, xiii, 303. [498]

The cerebellum of birds, with notes on the problem of localization in the cerebellum. B. BROUWER. *Folia neuro-biol.*, 1913, vii, 349.

Experimental cancer of the cerebellum. RONCALI. *Clin. chir.*, Milano, 1913, xxi, No. 6.

A case of tumor of the cerebellum. ALZINA and MELIS. *Rev. de cienc. med. de Barcel.*, 1913, xxxix, No. 5.

Two cases of cerebellar disease followed by autopsy. W. F. SCHALLER. *Calif. St. J. Med.*, 1913, xi, 281.

Occlusion of the posterior inferior cerebellar artery; report of case. G. W. ROBINSON. *J. Am. M. Ass.*, 1913, lxi, 179.

Acromegaly. REINHARDT and GRENZFELD. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 3.

Acromegaly. P. T. HURT. *Indianapolis M. J.*, 1913, xvi, 279.

Tumor of the hypophysis in a case of acromegaly. J. GRINKER. *J. Am. M. Ass.*, 1913, lxi, 235.

Experimental researches on the physiology of the hypophysis. SCHLIMPERT. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, No. 1.

Hypophyseal adiposity (basophilic adenoma of the hypophysis). BAUER and WASSING. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 30.

Fixation of the hypophysis and its adnexa, with retention of their vitality. THOMAS. *Deutsche Ztschr. f. Nerven.*, 1913, xlvii-xlviii, Festschr. v. Strümpell, 772.

A new way of attacking the hypophysis. W. H. NOWIKOFF. *Zentralbl. f. Chir.*, 1913, xl, 1000. [499]

The intracranial path of access for the extirpation of tumors of the hypophysis. RUPP. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 29.

Neck

A study of the carotid gland. J. E. SCHMIDT. *Zentralbl. f. Chir.*, 1913, xl, 1187.

Treatment of scrofulous lymphatic glands of the neck. T. VON MUTSCHENBACHER. *Berl. Klin.*, 1913, xxv, 1. [499]

Surgery of the neck: is unilateral resection of the internal jugular vein and of the pneumogastric nerve harmless? GUBAL. *Rev. de chir.*, Par., 1913, xxxiii, No. 7.

The accessory thyroid glands. W. G. MACCALLUM. *Ergebn. d. Med. u. Kinderh.*, 1913, xi, 569.

Effect of thyroid gland upon blood formation; a contribution to the physiology of the thyroid gland. G. MANSFELD. *Arch. f. d. ges. Physiol.*, 1913, clii, 23. [499]

Sarcomatous carcinoma, particularly of the thyroid gland. SIMMONDS. *Ztschr. f. Krebsforsch.*, Berl., 1913, xiii, No. 2.

Osteosarcoma of the thyroid gland. G. SOLARO. *Clin. chir.*, 1913, xxi, 1101. [500]

Epitheliosarcoma of the thyroid body. RASSAL and RIGAUD. *Arch. de méd. expér. et d'anat. path.*, Par., 1913, xxv, No. 4.

Paratracheal tumor—cystic adenoma of thyroid. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

Echinococcus cyst of the thyroid. G. GATTI. *Clin. chir.*, 1913, xxi, 713. [500]

Spheruliths in the thyroid gland. E. J. KRAUS. *Virchow's Arch. f. path. Anat.*, etc., Berl., 1913, ccxii, 367.

Tuberculosis of the thyroid gland. S. POLLAG. *Beitr. z. Klin. d. Tuberkul.*, 1913, xxvii, 159.

Changes in the thyroid gland in hereditary syphilis. BUSCH. *Russk. Vrach*, 1913, xii, 11.

The combination of thyreoses and nephroses. F. JAMIN. *Deutsche Ztschr. f. Nerven.*, Leipzig, 1913, xlviii, Festschr. v. Strümpell, 255. [500]

The effect of thyroidectomy on thyreosis. KRECKE. *Deutsche Ztschr. f. Nerven.*, Leipzig, 1913, xlvii-xlviii, Festschr. v. Strümpell, 337.

Experimental and clinical researches on the action of the blood after total and partial removal of the thyroid gland. RECKZEH. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 29.

Surgery of the thyroid; observations on five thousand operations. C. H. MAYO. *J. Am. M. Ass.*, 1913, lxi, 10. [501]

Injection of boiling water in the treatment of hyperthyroidism. F. M. PORTER. *J. Am. M. Ass.*, 1913, lxi, 88. [502]

Hyperthyroidism, its medical and surgical treatment. F. B. MARSHALL. *J. Mich. St. M. Soc.*, 1913, xii, 359.

Two cases of hemithyroidectomy for true exophthalmic goiter of tuberculous origin. P. DUFOR. *Lyon méd.*, 1913, cx, No. 14. [502]

Exophthalmic goiter. S. J. ESSENSON. *N. Y. M. J.*, 1913, xcvi, 80.

Basedow's disease. H. EPPINGER. *Handb. d. Neurol.*, 1913, iv. [502]

Acute Basedow's disease. R. VON FUNKE. *Zentralbl. f. inn. Med.*, 1913, xxxiv, 705.

Theoretical and experimental contributions to a new theory of Basedow's disease. J. MARIMON. *Berl. klin. Wchnschr.*, 1913, l, 1296.

Diagnostic and therapeutic notes on Basedow's disease. HALLERVORDEN. *Therap. d. Gegenwart*, 1913, liv, No. 7.

Lesions of the thyroid body in Basedow's disease. ROUSSY and CLUNET. *Rev. neurol.*, Par., 1913, xxi, No. 13.

The oculo-cardiac reflex in Basedow's syndrome. SAINTON. *Bull. méd.*, Par., 1913, xxvii, No. 60.

Basedow's syndrome and diabetes. SAINTON and GASTAUD. *Bull. méd.*, Par., 1913, xxvii, No. 58.

Late post-typhoid suppurative thyroiditis associated with secondary Basedow's disease. GALI. *Deutsche med. Wchnschr.*, 1913, xxxix, 1302.

Thirty cases of nervous, vaso-motor, Basedow's disease. ALQUIER. *Rev. neurol.*, Par., 1913, xxi, No. 12.

The structure of congenital goiter. KRASNOGORSKI. *Virchow's Arch. f. path. Anat.*, etc., Berl., 1913, ccxiii, No. 1.

The surgical aspects of goiter. U. MAES. *N. Orl. M. & S. J.*, 1913, lxvi, 33.

SURGERY OF THE CHEST

Chest Wall and Breast

Cancer of the breast. J. H. EVANS. Practitioner, Lond., 1913, xci, 7. [503]

Melanotic cancer of the breast in a man. GRIMOUD. *Sud méd.*, Marseille, 1913, xlv, No. 1962.

Metastatic cancer and secondary osteoplastic surgery in a case of cancer of the breast in an insane patient. ARSIMOLES and LEGRAND. *Echo méd. du nord*, Lille, 1913, xvii, No. 26.

The prognosis of cystadenoma of the breasts. RITTER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 679.

Cystic mammary tumors. H. UPCOTT. Practitioner, Lond., 1913, xci, 14.

Leiomyoma of the breast. L. STRONG. *Am. J. Obst.*, N. Y., 1913, lxxviii, 53.

Treatment of fractures of the clavicle. KÄFER. *München. med. Wchnschr.*, 1913, lx, No. 29.

Bilateral sterno-clavicular dislocation of congenital origin. GOURDON. *Rev. d'orthop.*, Par., 1913, iv, 304. [503]

Surgery of the sternum. H. HARTTUNG. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 315.

A rare malformation of the thorax. P. KREISS. *München. med. Wchnschr.*, 1913, lx, 1435.

The development of the thorax from birth to the completion of its growth and its relation to rickets. ZELTNER. *Jahrb. f. Kinderh.*, 1913, lxxviii, No. 1.

Thoracotomy and hydrothorax. E. SCHEPELMANN. *Klin.-therap. Wchnschr.*, 1913, xx, 681. [503]

The indications for artificial pneumothorax in pulmonary tuberculosis. H. SCHUR and S. PLASCHKE. *Wien. klin. Wchnschr.*, 1913, xxvi, 961. [504]

On the possibility of achieving by partial pneumothorax the advantages of complete pneumothorax in the treatment of pulmonary tuberculosis. W. P. MORGAN. *Lancet*, Lond., 1913, clxxv, 18.

The frequency of the development of pleuro-pulmonary fistulae during artificial pneumothorax and the therapeutic indications which result therefrom. BARD. *Semaine méd.*, Par., 1913, xxxiii, No. 29.

Technique of artificial pneumothorax. KAUFMANN. *Internat. Zentralbl. f. d. ges. Tuberkul. Forsch.*, 1913, vii, 320. [504]

Efforts toward the cure of pulmonary tuberculosis by surgical intervention. ALVAREZ. *Rev. de med. y cir. pract.*, Madrid, 1913, xxxvii, No. 1272.

Rational pneumopexy in thoracic surgery. G. LERDA. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 405.

Aspiration after thoracotomy in purulent pleurisy. DELBET. *J. d. praticiens*, Par., 1913, xxvii, No. 29.

Pneumolysis. JESSEN. *München. med. Wchnschr.*, 1913, lx, No. 29.

Extrapleural pneumolysis with immediate plugging (Plombierung) in pulmonary tuberculosis. G. BAER. *München. med. Wchnschr.*, 1913, lx, 1587.

Two cases of traumatic hemothorax. LEURET and GAUVENET. *Lyon méd.*, 1913, cxi, No. 27.

Final result of an intrathoracic subpleural graft in a case of an intrapulmonary suppurative cavity on the right side. T. TUFFIER. *Bull. et mem. Soc. de chir. de Par.*, 1913, xxxix, 740. [505]

The transpleural path of access. LAPEYRE. *Arch. gén. de chir.*, Par., 1913, vii, No. 6.

Primary lympho-endothelioma of the pleura. TRAINA. *Rev. méd. de Chile*, 1913, xli, No. 2.

A case of tumor of the mediastinum. LUCCARELLI. *Clin. chir.*, 1913, xxi, No. 6.

The thymus. BASCH. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 30.

Death caused by persistent thymus in small children. PEREZ-MONTAUT. *Frankf. Ztschr. f. Path.*, Wiesb., 1913, xiii, No. 2.

The chemical composition of the infantile thymus. L. MENDELSON. *Arch. f. Kinderh.*, 1913, lx, Festschr. f. Adolf Baginsky, 491.

Is it possible to obtain a successful demonstration of a persistent or hyperplastic thymus by means of Abderhalden's ferment reaction? KOLB. *München. med. Wchnschr.*, 1913, lx, No. 30.

New growth of the thymus in an adult associated with syndrome of transverse myelitis caused by vertebral metastases. ROCAVILLA. *Gazz. d. osp. e d. Clin.*, Milano, 1913, xxxiv, No. 87.

Trachea and Lungs

Wax-paraffin casts of the trachea, taken from the organs in situ. OPIKOFER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

Artificial breathing continued successfully for 15 days. S. F. DERJUSHINSKY. *Verhandl. d. XII Kong. Russ. Chir.*, 1913, xii, 208. [505]

"Cylindromata" of the upper respiratory passages. PFEIFFER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

Diagnosis and treatment of lodgment of foreign bodies in the respiratory passages. GUISEZ. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 6.

A voluminous foreign body in the respiratory passages; extraction by tracheotomy; recovery. CANTILENA and STRETTI. *Policlin.*, Roma, 1913, xx, No. 7.

Diagnosis of tracheo-bronchial foreign bodies. GUISEZ. *J. d. praticiens*, Par., 1913, xxvii, No. 27.

Foreign bodies in trachea and bronchial tubes. F. G. HODGSON. *J.-Rec. Med.*, 1913, lx, 146.

The extraction of a foreign body from the bronchi. SAVIN. *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, 1913, 776.

Two cases of death in bronchoscopic extraction of foreign bodies. V. HINSBERG. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw.*, 1913, lxxviii, 180.

Foreign body in right bronchus; lower bronchoscopy; successful extraction. G. HUTCHINSON. *Med. Rec.*, 1913, lxxxiv, 1.

A needle in the left bronchus of a girl 17 months old. GAREL and GIGNOUX. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 6.

Extraction of foreign bodies from the lung in children. SEHRT. *München. med. Wchnschr.*, 1913, lx, No. 27.

Spontaneous healing of traumata of the lung. TIEGEL. *Arch. f. klin. Chir.*, 1913, ci, No. 4.

A case of cancer of the lung. ORLOW. *Terap. Obozrenié*, Odessa, 1913, v, No. 12.

Metaplasia of the connective tissue of the lung during primary epithelioma. ARGAUD, CRESPIN and LEGROUX. *Province méd.*, Par., 1913, xxvi, No. 28.

Invasion of the lungs by tuberculosis, as seen by the röntgenologist. G. H. STOVER. *Denver M. Times*, 1913, xxxiii, 1.

Pulmonary echinococci and critical notes on the diagnosis of thoracic echinococci. E. KRÜGER. Dissertation, Königsberg, 1913.

Pulmonary embolism as a cause of post-operative death. G. PETRÉN. Beitr. z. klin. Chir., 1913, lxxxiv, 606. [505]

Arborization of ossification in the lung. K. RIEDIGER. Dissertation, Erlangen, 1913.

Heart and Vascular System

Wounds of the heart. LEOTTA. Policlin., Roma, 1913, xx, No. 7.

Two cases of sutured wounds of the heart; one death; one recovery. CERNÉ. Bull. méd., Par., 1913, xxvii, No. 55.

Wounds of the pericardium and heart. G. C. HOLLADAY. N. Y. M. J., 1913, xcvi, 186.

Pericardiolysis in certain affections of the heart or pre-pericardiac thoracotomy. DELAGENIERE. Arch. prov. de chir., Par., 1913, xxii, No. 6.

The treatment of tubercular pericarditis by pericardotomy without drainage. O. JACOB. Bull. et mem. Soc. de chir. de Par., 1913, xxxix, 732. [505]

Should we operate on the pericardium? BLECHMANN. Paris méd., 1913, No. 33.

Aortic aneurism rupturing into the pulmonary artery, with a report of three cases. H. N. STEVENSON. Bull. Johns Hopkins Hosp., 1913, xxiv, 217.

The pathology of syphilitic aortitis with a contribution to the formation of aneurisms. M. C. WINTERNITZ. Bull. Johns Hopkins Hosp., 1913, xxiv, 212.

Pharynx and Oesophagus

The value of the methods of extracting foreign bodies from the oesophagus. WAGNER. Deutsche med. Wchnschr., 1913, xxix, No. 28.

Oesophagoscopy, laryngoscopy, and bronchoscopy as an aid to the detection of disease and removal of foreign bodies impacted in the food and air passages. W. MILLIGAN. Lancet, Lond., 1913, clxxxv, 65.

Notes on recent cases of oesophagoscopy, bronchoscopy, and laryngoscopy. R. H. JOHNSTON. Am. J. Surg., 1913, xvii, 259.

The removal of foreign bodies from the upper end of the oesophagus. R. H. JOHNSTON. Laryngoscope, 1913, xxiii, 761.

Diagnosis and treatment of cicatricial stenosis of the oesophagus. GUISEZ. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

A diverticulum formed just above a cicatricial stenosis of the oesophagus. H. FLESC. Jahrb. f. Kinderh., 1913, lxxviii, 83.

A case of very marked stenosis of the oesophagus leading to complete occlusion in the lower portion following cauterization of the lung. K. MAISEL. Dissertation, Erlangen, 1913.

Congenital stenoses of the oesophagus. GUISEZ. Rev. med., 1913, xxi, 262. [506]

Types of occlusion of the oesophagus in early life. T. M. ROTCH. Am. J. Dis. Children, 1913, vi, 1. [506]

Congenital occlusions of the oesophagus and lesser bowel. G. H. EDINGTON. Glasgow M. J., 1913, lxxx, 16.

The present status of oesophagoscopy in cancer of the oesophagus. R. LEWINSOHN. Med. Rec., 1913, lxxxiv, 65.

The radical operation in carcinoma of the oesophagus. DENK. Zentralbl. f. Chir., 1913, xl, No. 27.

Report on the first successful resection of the thoracic portion of oesophagus for carcinoma. TOREK. Deutsche Ztschr. f. Chir., 1913, cxiii, Nos. 3-4.

A case of oesophagitis dessecans following poisoning by acetic acid. GESSELEWITSCH. Russk. Vrach, 1913, xii, 771. [506]

Plastic surgery of the oesophagus. I. O. GALPERN. Verhandl. d. XII Kong. Russ. Chir., Moscow, 1913, xii, 113.

Plastic surgery of the oesophagus. ENDERLEN and HOTZ. Zentralbl. f. Chir., 1913, xl, 1175.

Miscellaneous

Infection of the thoracic cavity. BURCKHARDT. Arch. f. klin. Chir., 1913, ci, No. 4.

Penetrating thoraco-abdominal wounds. GULEKE. Arch. f. klin. Chir., 1913, ci, No. 4.

The rapidity with which contamination of the thoracic cavity and its contained glands follows infection of the peritoneal cavity. C. C. TWORT. Lancet, Lond., 1913, ii, 216.

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

A case of ossification of the scar of a laparotomy wound. BORGH. Morgagni, 1913, lv, No. 6.

Penetrating wounds of the abdomen. IRAOLA. Rev. de l. hosp., Montevideo, 1913, lv, No. 4.

Five cases of contusion of the abdomen. PRAT. Rev. de l. hosp., Montevideo, 1913, lv, No. 5.

Surgical treatment of subcutaneous lesions of the abdomen. GLASSTEIN. Terap. Obozréníé, Odessa, 1913, v, No. 12.

Desmoid tumor of rectus muscle. J. B. MURPHY. Surg. Clin. J. B. Murphy, 1913, ii, No. 3. [506]

Report of an autopsy on a case in which both of the rectus muscles were cut transversely. S. R. MAXEINER. J.-Lancet, 1913, xxxiii, 376.

Laparoscopy and thoracoscopy. JACOBÆUS. J. méd. franc., Par., 1913, vii, No. 7.

The value of the introduction of oxygen or air into the abdominal cavity for purposes of experimental and diag-

nostic röntgenology. WEBER. Fortschr. a. d. Geb. d. Röntgenstr., Hamburg, 1913, xx, No. 5.

Air in the abdomen following laparotomies. COHN. Berl. klin. Wchnschr., 1913, l, No. 29.

Retroperitoneal sarcoma with recovery; a case report. TAFT and JARVIS. Am. J. Surg., 1913, xxvii, 271.

Retroperitoneal cysts of Wolffian origin; Wolffian cyst of the descending mesocolon. JACQUOT and FAIRISE. Rev. de gynéc. et de chir. abdom., Par., 1913, xx, No. 6.

Normal peritoneal fold. EVANS and BOWEN. Iowa M. J., 1913, xx, 1.

Multiple hydatid cysts of the peritoneum. DÉVÉ. Arch. gén. de chir., Par., 1913, vii, No. 6.

Biliary peritonitis. VOGEL. Wien. klin. Wchnschr., 1913, xxvi, No. 28.

Rehn's treatment of peritonitis. K. PROPPING. Deutsche med. Wchnschr., 1913, xxxix, 1096. [507]

Camphorated oil in peritonitis and abscesses of the pouch of Douglas. BLECHER. München. med. Wchnschr., 1913, lx, 1261. [507]

Tubercular peritonitis. F. HÄRTEL. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 370. [507]

The employment of tincture of iodine in dry peritoneal tuberculosis. S. STOCKER. *Schweiz. Rundschau f. Med.*, 1913, xiii, 745. [507]

The operative treatment of peritoneal and genital tuberculosis. O. SCHMIDT. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 404.

Tubercular peritonitis and its operative treatment. A. G. RUSSANOFF. Dissertation, Moscow, 1913. [507]

Subphrenic abscess caused by an ulcer. L. HÖFLICH and Z. TAKÁCS. *Budapesti kir. Orvose. értesítője*, 1913, ii, 376.

Diaphragmatic eventration (relaxation of the diaphragm). P. KRAUSE. *Deutsche Ztschr. f. Nervenhe.*, Leipzig, 1913, xlvii, Festschr. f. von Strümpell, 328.

Diaphragmatic hernia in a phthisical subject. MELCHIOR. *Ugesk. f. Læger, Kjøbenh.*, 1913, lxxv, No. 25.

Accidents and complications of hernia. A. A. KERR. *Am. J. Surg.*, 1913, xxvii, 245.

Inguinal hernia of fatty tissues; intermittent crural properitoneal hernia. VANVERTS. *Echo méd. du nord*, Lille, 1913, xvii, No. 27.

Constricted hernia of the epiploön. JABOULAY. *Progrès méd.*, Par., 1913, xlv, No. 26.

Multiple herniæ, obturator, ischiatic and femoral, in an adult. H. RISCHBIETH. *Australas. M. Gaz.*, 1913, xxxiv, 71.

Two very voluminous scrotal hernias. GIERSEWSKI. *Deutsche med. Wchnschr.*, 1913, xxxix, 1207.

Hernia-urethral stricture; report of two cases. J. M. WHITE. *Internat. J. Surg.*, 1913, xxvi, 251.

Retrograde incarceration—hernia "en W." LOUIS FRIEDMAN. *Surg., Gynec. & Obst.*, 1913, xvii, 97. [508]

A new case of hernia subtransversalis. G. PEUS. *Gynäk. Rundschau*, 1913, vii, 281. [508]

A simple aid in the reduction of hernias in nurslings. A. NUSZBAUM. *München. med. Wchnschr.*, 1913, lx, 1434.

Prophylaxis against hernias and protrusions following laparotomies. G. A. WALJASCHKO and A. A. LEBEDEV. *Arch. f. klin. Chir.*, 1913, ci, 896.

The appendix and appendicitis in the herniary sac and appendectomy in radical operations for inguinal and crural hernia. J. NORRLIN. *Hygiea*, Stockholm, 1913, lxxv, 379.

Permanent operative results of crural hernias. H. ROSENFELD. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 563.

A rational deep suture for Bassini's operation. A. SANATUCCI. *Clin. chir.*, 1913, xxi, 779. [509]

A case of intra-herniary torsion of the great omentum. PATEL and SANTY. *Lyon chir.*, 1913, x, No. 1.

The significance of the omentum in physiological and pathological conditions. W. GUNDERMANN. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 587. [509]

The pathology of the great omentum. GUNDERMANN. *Zentralbl. f. Chir.*, 1913, xl, 1180.

Circumscribed inflammatory tumor formation in the pelvis, originating from the greater omentum. SCHMIEDEN. *Berl. klin. Wchnschr.*, 1913, l, 908. [509]

An uncommon case of lymphosarcoma of the mesenteric glands. COEN. *Riv. osp.*, Roma, 1913, iii, No. 13.

An interesting case of tumor of the mesentery. CABRERA and DOMINGUEZ. *Rev. de med. y cir. de la Habana*, 1913, xviii, No. 13.

Mesenteric cysts, with report of a case of sanguineous cysts of the mesentery of the small intestine. C. H. FRAZIER. *J. Am. M. Ass.*, 1913, lxi, 97. [509]

Mesenteric and retroperitoneal blood cysts. F. CAROTOLRI. *Clin. chir.*, 1913, xxi, 725. [510]

A case of mesenteric thrombosis. H. H. RAYNER. *Med. Chronicle*, 1913, lvii, 130.

Gastro-Intestinal Tract

Radiography in a case of hairball in the stomach. C. T. HOLLAND. *Arch. Röntg. Ray*, 1913, xvii, 46.

Some radiographs of obscure stomach and intestinal cases. S. TOUSEY. *N. Y. M. J.*, 1913, xcvii, 1.

X-ray examination of a woman in whom the stomach and two vagus nerves had been resected. M. COHN. *Berl. klin. Wchnschr.*, 1913, l, 1393.

The effect of meals taken subsequent to the test-meal in röntgenological determination of the motility of the stomach. M. LÜDIN. *Deutsche med. Wchnschr.*, 1913, xxix, 1239.

Movements of the stomach and duodenum studied by the perfusion method. P. CARNOT. *Compt. rend. Soc. de Biol.*, 1913, lxxiv, 1265. [510]

Covered perforations of the stomach. HUSTIN. *J. méd. de Brux.*, 1913, xviii, No. 27.

Diagnosis and surgical treatment of gastric and duodenal ulcers. SHERREN. *Berl. klin. Wchnschr.*, 1913, l, No. 28.

The X-ray method in diagnosis of gastric and duodenal ulcer. F. W. WHITE and A. W. GEORGE. *Boston M. & S. J.*, 1913, clxix, 157. [511]

The X-ray in the diagnosis of gastric ulcer and its sequelæ. R. W. MILLS and R. D. CARMAN. *Surg., Gynec. & Obst.*, 1913, xvii, 1. [511]

X-ray diagnosis of ulcers of the stomach. DOMINGUEZ. *Rev. de med. y cir. de la Habana*, 1913, xviii, No. 12.

Chronic gastric ulcer in the X-ray picture of the air-inflated stomach. W. RÖPKE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 307. [512]

Attempted X-ray treatment of ulcer of the stomach. KODON. *Fortschr. a. d. Geb. d. Röntgenstr.*, Hamburg, 1913, xx, No. 3.

Heredity of round ulcer of the stomach. DAUWE. *Arch. d. mal. de l'appareil digest. et nutr.*, Par., 1913, vii, No. 7.

Large ulcer of the stomach in a tuberculous patient. MATTEI and RABOUL LACHAUX. *Marseille méd.*, 1913, l, No. 14.

A preliminary note on the experimental production of gastric ulcers by the intravenous injection of clumped colon bacilli. E. C. STEINHARTER. *Boston M. & S. J.*, 1913, clxix, 81. [512]

Perforation of an ulcer of the stomach under ordinary strain not a basis for a claim for indemnity. FRANK. *Med. Klin.*, Berl., 1913, ix, No. 27.

Posterior gastrojejunostomy in acute perforative ulcer of the stomach and duodenum. J. B. DEEVER. *J. Am. M. Ass.*, 1913, lxi, 75. [512]

The relations of chronic gastritis and its sequelæ and of chronic gastric ulcer to the development of gastric carcinoma. G. E. KONJETZNY. *Beitr. z. klin. Chir.*, 1913, lxxxv, 455.

Carcinoma of the stomach. C. GRAHAM. *Med. Herald*, 1913, xxxii, 7.

Cancer of the stomach. TRUESDALE. *Boston M. & S. J.*, 1913, clxix, 44. [513]

The early diagnosis of gastric carcinoma by aid of Röntgen ray. W. F. HILGER. *Wis. M. J.*, 1913, xii, 46.

Negative röntgenological diagnosis in clinically diagnosed gastric carcinoma. G. H. STOVE. *Med. Rec.*, 1913, lxxxiv, 66.

The peptide-splitting ferment of the carcinomatous stomach and its value in diagnosis. A. G. BRYCE. *Med. Chron.*, Balt., 1913, xxv, 161.

Perforation in cancer of the stomach. JAISON. *Arch. d. mal. de l'appareil digest. et nutr.*, Par., 1913, vii, No. 7.

Neoplasm of the stomach and of the pancreas. MATTEI and REBOUL-LACHAUX. *Marseille méd.*, 1913, l, No. 14.

Fibromatosis of the stomach and its relationship to ulcer. A. THOMSON and J. M. GRAHAM. *Edinb. M. J.*, 1913, xi, 7. [513]

A voluminous leiomyoma of the gastric wall. G. MOCCIA. *Clin. chir.*, 1913, xxi, 1331.

Gastro-colic resection, a typical operation in certain forms of gastric carcinoma. G. PERTHES. *Zentralbl. f. Chir.*, 1913, xl, 1097.

Extensive resection of the stomach. MARIO. *Clin. chir.*, Milano, 1913, xxi, No. 6.

The relation of gastrostomy to inoperable carcinoma of the oesophagus, with a description of a new method of performing gastrostomy. H. H. JANEWAY. *J. Am. M. Ass.*, 1913, lxi, 93. [514]

The technique of the suture in gastrostomy after the method of Witzel. M. M. KRJUKOW. *Arch. f. klin. Chir.*, 1913, ci, 843.

A procedure of gastric autoplasmic surgery by means of transplantation of a loop of the small intestine; presentation of a specimen from experiments performed on a dog. CHASTENET DE GÉRY. *Gaz. méd. de Nantes*, 1913, xxxi, No. 28.

The use of the rubber dam in gastro- and entero-enterostomy. C. E. RUTH. *Med. Council*, 1913, xviii, 249.

Stenosis of the pylorus in infancy. C. L. SCUDDER. *Illinois M. J.*, 1913, xxiv, 1.

Congenital hypertrophic pyloric stenosis. R. E. McKECHNIE. *Canad. M. Ass. J.*, 1913, iii, 566.

Pyloropexy. A. HOFMANN. *Zentralbl. f. Chir.*, 1913, xl, 1169.

How is exclusion of the pylorus and the duodenum to be obtained? LERICHE. *Lyon chir.*, 1913, x, No. 1.

Indications for the duodenal method of alimentation. EINBORN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 29.

Permanent alimentation through a duodenal sound. LAZARUS. *Berl. klin. Wchnschr.*, 1913, l, No. 30.

Contusions of the duodenum. FAVREUL. *Arch. prov. de chir.*, Par., 1913, xxii, No. 6.

The positive diagnosis of duodenal ulcer by means of the Röntgen ray. A. W. GEORGE. *Am. Quart. Röntgenol.*, 1913, iv, 187. [514]

The diagnosis and prognosis of duodenal ulcer. J. T. PILCHER. *Med. Rec.*, 1913, lxxxiv, 156.

My duodenal ulcer. X. COMBES. *Med. Press & Circ.*, 1913, xcvi, 58.

X-ray diagnosis of stenoses of the small intestine. H. ASSMANN. *Deutsche Ztschr. f. Nervenhe.*, 1913, xlvii, Festschr. f. von Strümpell, 1.

Traumatic cicatricial stenosis of the intestines while the abdominal walls are intact. P. F. KOLTSCHIN. *Chirurgia*, St. Petersburg., 1913, xxxiii, 672.

Intestinal obstruction. W. E. DICKEN. *J. Okla. St. M. Ass.*, 1913, vi, 68.

Intestinal obstruction due to large gall-stone in ileum. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

Intestinal obstruction in the rabbit. BUNTING and JONES. *J. Exp. Med.*, 1913, xxviii, 25. [514]

Obstruction of small intestine due to adhesion of stomach to peritoneum in lesser peritoneal cavity; division of adhesion; cure; case report. S. C. NASON. *Am. J. Surg.*, 1913, xxvii, 272.

A rare case of intestinal occlusion. KIRCHENBERGER. *Wien. med. Wchnschr.*, 1913, lxiii, No. 29.

A case of ileus caused by retroversion of the large intestine. T. ROVSING. *Hosp.-Tid, Kjøbenhavn.*, 1913, lvi, 853.

Congenital obliteration of the small intestine. H. VON THUN. *Hosp.-Tid, Kjøbenhavn.*, 1913, lvi, 827.

Incarceration of the intestine. A. P. SEMENOWSKI. *Chirurgia*, St. Petersburg., 1913, xxxiii, 681.

Acute and chronic invaginations. S. B. DE GROOT. *Geneesk. Bladen u. klin. en labor*, 1913, xiii, 1.

Ascarides as the cause of intestinal invagination. HOHMEIER. *Zentralbl. f. Chir.*, 1913, xl, 1178.

Surgical affections caused by ascarides. SCHLOESSMANN. *Zentralbl. f. Chir.*, 1913, xl, 1178.

Volvulus as a cause of melæna neonatorum. L. NÜRNBERGER. *Samml. klin. Vortr.*, 1913, No. 679, 639.

Aseptic enterostomy. A. WOLFF. *Zentralbl. f. Chir.*, 1913, xl, 1170.

Note on a case of incarceration of the cæcum and ascending colon in lesser sac of peritoneum; operation; recovery. I. BACK. *Lancet*, Lond., 1913, clxxxv, 17.

Infectious granuloma of caput coli; resection of cæcum and anastomosis of ileum to ascending colon. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

Resection of the ileo-cæcal portion of the intestine on account of invagination caused by a submucous lipoma. ANDRÉE. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

The black (pigmented) appendix. W. BATTLE. *Lancet*, Lond., 1913, clxxxv, 135.

The pathology and diagnosis of appendicitis. F. H. SMITH. *Va. M. Semi-Month.*, 1913, xviii, 188.

Is appendicitis ever catarrhal? F. A. PALMER. *Med. Rec.*, 1913, lxxxiv, 139.

Symptoms and medical treatment of appendicitis. A. B. GRUBB. *Va. M. Semi-Month.*, 1913, xviii, 194.

Diagnosis of paresis of the appendix. STERN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 27.

Errors of diagnosis in appendicitis. DE QUERVAIN. *Rev. méd. Suisse romande*, 1913, xxxiii, 513. [515]

Diagnosis of appendicitis. DIVARIS. *Grèce med.*, Athenai, 1913, xv, Nos. 11 and 12.

Appendicitis in children. J. G. SHERRILL. *Pediatrics*, 1913, xxv, 433.

Two cases simulating appendicitis. E. S. JACKSON. *Australas. M. Gaz.*, 1913, xxxiv, 4.

Ileus and appendicitis. W. WIEGELS. *München. med. Wchnschr.*, 1913, lx, 1644.

Hydro-appendicitis. DUCOUX. *Rev. de gynec. et de chir. abdom.*, 1913, xx, 143. [515]

Cases of appendicitis, cholelithiasis and pericholecystitis showing the clinical picture of ulcer of the stomach or duodenum. J. PÖLYA. *Budapesti Kir. Orvose. értesítője*, 1913, ii, 377. [515]

The co-relation of appendicitis, mucous colitis and membranous pericolicitis. A. BENJAMIN. *J.-Lancet*, 1913, xxxii, 401.

A case of formation of pseudo-myxoma following appendicitis. PACZEK. *Wien. klin. Rundschau*, 1913, xxvii, Nos. 27 and 28.

Pseudo-myxoma of the appendix. COCHEZ. *Bull. méd. de l'Algérie*, Alger, 1913, xxiv, No. 11.

Gelatinous cysts of the appendix. MÉRÉL and DAUNIC. *Toulouse méd.*, 1913, xv, No. 13.

Congenital absence of the appendix and acute appendicular syndrome. BÉRARD and BUCHE. *Province méd.*, Par., 1913, xxvi, No. 26.

Gastric hyperacidity of appendicular origin. S. SOLIERI. *Rev. osp.*, 1913, iii, No. 10. [515]

Responsibility of the physician in the management of appendicitis. R. H. WOOLING. *Va. M. Semi-Month.*, 1913, xviii, 192.

The treatment of appendicitis. DEHELLY. *Arch. méd.-chir. de Normandie*, Le Havre, 1913, iv, No. 6.

Surgical treatment of appendicitis. S. S. GALE. *Va. M. Semi-Month.*, 1913, xviii, 195.

Early operation in appendicitis. B. G. SCHAREZKY. *Verhandl. d. XII. Kong. Russ. Chir.*, Moscow, 1913, xii, 125.

- Operation in the intermediate period for appendicitis. BARATYNSKY. *Chir. arch. Veliaminova*, St. Petersburg, 1913, **xxix**, No. 3.
- Treatment of grave enteritis by appendicostomy. ROUX and BRIGNOLLES. *Marseille méd.*, 1913, **l**, No. 13.
- Grape seeds in pelvis abscess. C. H. CARGILE. *South. M. J.*, 1913, **vi**, 330. [516]
- Etiology and significance of pericolic membranes. D. CHEEVER. *J. Am. M. Ass.*, 1913, **lx**, 248. [516]
- Pericolicitis. G. J. BARADULIN. *Verhandl. d. XII. Kong. Russ. Chir.*, Moscow, 1913, **xii**, 145.
- Intestinal stasis. M. B. SCHLESINGER. *Boston M. & S. J.*, 1913, **clxix**, 14.
- Chronic intestinal stasis. W. B. BAINBRIDGE. *J. Maine M. Ass.*, 1913, **iii**, 1393.
- Intestinal stasis from the medical standpoint. A. BASSLER. *Am. J. Gastro-Enterol.*, 1913, **iii**, 1.
- Intestinal stasis caused by band of adhesions. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, **ii**, No. 3.
- The use of the Röntgen rays in diagnosis of intestinal stasis. G. E. PFAHLER. *Am. J. Gastro-Enterol.*, 1913, **iii**, 8.
- Intestinal angulations and kinks associated with stasis. WHEELER. *Med. Press & Circ.*, 1913, **xvii**, 8.
- The relations of adhesions and intestinal angulations resulting from enteroptosis in chronic constipation. R. C. KEMP. *N. Y. M. J.*, 1913, **xviii**, 1.
- Cæco-sigmoidostomy in chronic intestinal stasis. F. C. YEOMANS. *Am. J. Gastro-Enterol.*, 1913, **iii**, 12.
- The surgical treatment of chronic intestinal stasis. W. S. BAINBRIDGE. *Am. J. Gastro-Enterol.*, 1913, **iii**, 12.
- Radiographic colon diagnosis. R. UPHAM. *N. Am. J. Homeop.*, 1913, **xxviii**, 389.
- Volvulus of the large intestine. BUNDSCHUH. *Beitr. z. klin. Chir.*, 1913, **lxxxv**, No. 1.
- Hirschsprung's disease, or congenital dilatation of the colon in a boy of three years; resection of colon; recovery. H. T. MACHELL. *Canad. J. M. & S.*, 1913, **xxxiv**, 17.
- Congenital megacolon. GARCIA. *Argentine med.*, Buenos Aires, 1913, **ii**, No. 24.
- A case of traumatic rupture of the bowel. C. H. MULRONEY. *Iowa M. J.*, 1913, **xx**, 39.
- Cancer of the colon. S. WHITE. *Brit. M. J.*, 1913, **ii**, 57. [516]
- Diffuse adenomatous intestinal polyposis. G. SCAGLIOSI. *Deutsche med. Wchnschr.*, 1913, **xxxix**, 1502.
- Actions of X-rays on polyadenomas of the intestine. AUBERTIN and BEAUJARD. *Bull. et mem. Soc. méd. d. hôp. de Par.*, 1913, **No. 22**, 1221. [516]
- X-ray diagnosis of colitis ulcerosa. R. KIENBÖCK. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, **xx**, 231. [516]
- A clinical study of severe hæmorrhagic or dysenteriform colitis in the adult. MATHIEU. *Gaz. d. hôp., Par.*, 1913, **lxxxvi**, No. 80.
- Differential diagnosis of dysenteriform and hæmorrhagic colitis in the adult; the possible varieties of surgical intervention in these diseases. MATHIEU. *Gaz. d. hôp., Par.*, 1913, **lxxxvi**, No. 82.
- Marked colitis and its operative indications. MATHIEU. *J. d. praticiens, Par.*, 1913, **xxvii**, No. 29.
- The treatment of muco-membranous entero-colitis. ZUKOLLA. *Terap. Obozrenié*, Odessa, 1913, **v**, No. 13.
- Surgical treatment of severe chronic colitis and of some severe forms of constipation. MATHIEU. *Gaz. d. hôp., Par.*, 1913, **lxxxvi**, No. 85.
- The value of primary resection of the large intestine. P. D. SSOLOWOFF. *Verhandl. d. XII. Kong. Russ. Chir.*, Moscow, 1913, **xii**, 144.
- Remarks on the surgery of the large intestine. B. MOYNIHAN. *Lancet, Lond.*, 1913, **clxxxv**, 1.
- Surgery of the large intestine, with the exception of the rectum. FINKELSTEIN. *Arch. f. klin. Chir.*, 1913, **ci**, No. 4.
- The bowel doormaker; with description of technique of operation for short-circuiting bowel. R. T. MORRIS. *Med. Rec.*, 1913, **lxxxiv**, 103.
- Non-neoplastic stenoses of the sigmoid colon and their relations to megacolon. CADE, ROUBIER and MARTIN. *Lyon chir.*, 1913, **x**, No. 1.
- Radical operation in two stages for stricture-producing carcinoma of the sigmoid colon. MADLENER. *Zentralbl. f. Chir.*, 1913, **xl**, No. 30.
- Ileus of the sigmoid flexure. J. M. LITOSCHENKO. *Chirurgia, St. Petersburg*, 1913, **xxxiii**, 648.
- Ileo-sigmoidostomy: its indications and future. E. HALL. *Western M. News*, 1913, **v**, 155.
- Cure of prolapse of the rectum by operation after the method of Hoffmann. J. VIGYÁZÓ. *Budapesti Orvosi Ujság Sebészeti*, 1913, **xi**, 22.
- The treatment of prolapse of the rectum in children. F. PIELSTICKER. *Monatschr. f. Kinderh.*, 1913, **xii**, 111.
- Operations in prolapse of the rectum after the method of Napalkoff. A. W. TICHONOWITSCH. *Chirurgia, St. Petersburg*, 1913, **xxxiii**, 644.
- Cancer of the rectum. G. B. KELSO. *Clinique*, 1913, **xxxiv**, 372.
- Surgical treatment of cancer of the rectum. DEPAGE and MAYER. *Arch. prov. de chir., Par.*, 1913, **xxii**, No. 6.
- Two cases of resection of the rectum on account of cancer. PIOLLET. *Arch. prov. de chir., Par.*, 1913, **xxii**, No. 6.
- Plastic surgery of the rectum. J. PÖLYA. *Budapesti Orvose, értestöje*, 1913, **xi**, 379.
- Absence of the rectum; iliac anus; sigmoidectomy and perineotomy; recovery. SOUZA. *Rev. de med. y cir. de la Habana*, 1913, **xviii**, No. 13.
- Operative treatment of fæcal fistula. A. B. KOPYLOFF. *Chirurgia, St. Petersburg*, 1913, **xxxiii**, 685.
- Operation and after-treatment of fistula in ano. L. MUMMERY. *Lancet, Lond.*, 1913, **clxxxv**, 72.
- A new operation for hæmorrhoids. W. M. BEACH. *Pittsburgh M. J.*, 1913, **i**, 1. [516]
- The X-ray diagnosis of gastro-intestinal disease. A. M. COLE. *J. Indiana St. M. Ass.*, 1913, **vi**, 307.
- Radiograph as an aid to diagnosis and treatment of gastro-intestinal lesions. H. P. COLE. *South. M. J.*, 1913, **vi**, 7.
- Methods of X-ray examination for the study of the gastro-intestinal tract, with special consideration of the contrast substances. KRAUSE and SHILLING. *Fortschr. a. d. Geb. d. Röntgenstr., Hamburg*, 1913, **xx**, No. 3.
- Some rare forms of hæmorrhage in the gastro-intestinal tract. E. STADELMANN. *Berl. klin. Wchnschr.*, 1913, **l**, 825.
- Pneumonic enterorrhagia; hæmorrhagic ulcerous enteritis caused by pneumococci. SANDRO. *Policlin.*, Roma, 1913, **xx**, No. 7.
- Motility and shape of the intestines. G. VON BERGMANN and G. KATSCH. *Deutsche med. Wchnschr.*, 1913, **xxix**, 1294.
- A description of the enteroptotic woman. R. R. SMITH. *Surg., Gynec. & Obst.*, 1913, **xvii**, 71. [516]
- Some experiences in the surgical treatment of ulcers and carcinoma of the intestinal tract. C. A. HAMANN. *J. Mich. St. M. Soc.*, 1913, **xii**, 355.
- Intestinal sarcomata. W. WORTMANN. *Deutsche Ztschr. f. Chir.*, 1913, **cxiii**, 103.
- Syphilitic affections of the digestive organs. J. M. WOLPE. *Russk. J. Koshnych i vener. boľesnei*, St. Petersburg, 1913, **xxv**, 239.

Liver, Pancreas and Spleen

The relations of the liver to the thyro-parathyroid apparatus. DELAUNAY. J. sc. et méd. et Poitiers, 1913, v, No. 7.

Tests for hepatic function and disease under experimental conditions. WHIPPLE, MASON and PEIGHTAL. Bull. Johns Hopkins Hosp., 1913, xxiv, 207.

Radioscopic examination of the liver. JAUZEAS. Arch. Röntg. Ray, 1913, xviii, 48. [518]

Transjejunal drainage of the liver. NORDMANN. Arch. f. klin. Chir., 1913, ci, No. 4.

Subcutaneous injuries of the liver. F. A. FÁYKISS. Budapesti Orvosi Ujság, 1913, xi, 53.

Cicatrization of wounds of the liver, the gall-bladder and the kidney. VALIACHKO and LEBEDEFF. Russk. Vrach, St. Petersburg, 1913, xii, No. 28.

Primary chorio-epithelioma of the liver. B. FISCHER. Frankf. Ztschr. f. Pathol., 1913, xii, 462. [518]

Hepatic hydropneumocyst which developed in a large abscess of the liver, following dysentery; radioscopic and radiographic examinations. CLUZET and BAUR. Lyon méd., 1913, cxxi, No. 28.

Some clinical considerations on the diagnosis and treatment of abscess of the liver, based on 200 personal cases. SIERRA. Rev. méd. de Chile, 1913, xli, No. 3.

Abscesses of the liver at the hospital of Haiphong. SAMBUC. Arch. gén. de chir., Par., 1913, vii, No. 6.

Large amoebic abscess of the liver; rapid cure by surgical treatment followed by emetine. A. CHAUFFARD. Bull. et mem. Soc. med. d. hôp. de Par., 1913, No. 10, 630. [518]

Nine cases of dysentery and amoebic abscess of the liver cured by Rogers' method. MOROTTA. Argentina med., Buenos Aires, 1913, ii, No. 27.

Radical operation in alveolar echinococcus of the liver. Comment on the article of the same title by Prof. Mysch. N. ALFUTOFF. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, 519.

The employment of fascia lata in resections of the liver. CHESSIN. Zentralbl. f. Chir., 1913, xl, No. 30.

Resection of the liver. LINDNER. Zentralbl. f. Chir., 1913, xl, 917.

Resection of the left lobe of the liver because of cavernoma. Z. COLLEONI. Gazz. d. osp. e d. clin., Milano, 1913, xxvix, No. 78.

The gall-bladder and the chemistry of the stomach. MAGNUS. Med. Klin., Berl., 1913, ix, No. 27.

Congenital anomalies of the gall-bladder and the hepatic artery. KEHR. Zentralbl. f. Chir., 1913, xl, 690. [519]

The incidence of stone in Egypt, with remarks on a series of 312 operations. F. C. MADDEN. Lancet, Lond., 1913, clxxxv, 132.

Statistical, clinical and chemical studies on the etiology of gall-stones with special reference to Japanese and German conditions. H. MIYAKE. Arch. f. klin. Chir., 1913, ci, 54. [519]

Gall-stones; a plea for earlier operation. D'ARCY POWER. Brit. J. Surg., 1913, i, 21.

A case of gall-stones with chronic pancreatitis. H. T. MURSELL. South African M. Rec., 1913, xi, 259.

Medical treatment of gall-stones. T. W. GRAYSON. Pittsburgh M. J., 1913, i, 25.

Injury of the gall-bladder by a bullet. G. VIGYÁZÓ. Budapesti Kir. Orvose. értesítője, 1913, xi, 387.

The conditions of acidity of the stomach in affections of the gall-bladder and their value in therapeutics. OHLY. Deutsche med. Wchnschr., 1913, xxxix, No. 29.

Cholecystitis and some of its sequelæ. A. F. SAMPSON. Tex. M. J., 1913, xxix, 1.

Congenital defect of the bile ducts. F. SCHOTTEN. Mitt. a. d. Ham. Staatskrankenanst., 1913, xiv, 1.

Affections of the bile-ducts. PRINGSHEIM. Med. Klin., Berl., 1913, ix, Nos. 29 and 30.

Angiocholitis and biliary lithiasis. DELREZ. Scalpel et Liège méd., 1913, lxv, No. 52.

A case of perforated common bile duct followed by subphrenic abscess, operation and recovery. C. CAMPBELL-HORSFALL. Brit. M. J., 1913, ii, 118.

Cysts of the ductus choledochus. W. M. MINTZ. Verhandl. d. XII. Kong. Russ. Chir., Moscow, 1913, xii, 161.

Operative treatment of chronic occlusion of the choledochus. E. J. KRAMARENKO. Verhandl. d. XII. Kong. Russ. Chir., Moscow, 1913, xii, 157.

Cholecystenterostomy for obstruction of the common bile duct due to multiple hydatid disease. G. H. ABBOTT. Australas. M. Gaz., 1913, xxxiv, 76.

Acute pancreatic syndrome. SFORZA. Riv. osp., Roma, 1913, iii, No. 13.

Clinical and experimental contributions on necrosis of the pancreas. SEIDEL. Beitr. z. klin. Chir., 1913, lxxxv, No. 1.

Three cases of acute affections of the pancreas associated with multiple necroses of the subperitoneal adipose tissue. KOSLOWSKY. Russk. Vrach, St. Petersburg, 1913, xii, 768.

Adenoma of the pancreas. PROSOROWSKY. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 2.

Traumatic pancreatic pseudo-cyst. MOORHEAD and STONY. Clin. J., 1913, xlii, 209.

Cyst of the pancreas. S. B. MARKS. Ky. M. J., 1913, xi, 551.

Diagnosis and treatment of acute affections of the pancreas. W. VON REYHER. St. Petersburg. med. Ztschr., 1913, xxxviii, 128.

New technique for establishing a permanent pancreatic fistula; presentation of animals and specimens. A. FROUIN. Compt. rend. hebdom. Soc. de Biol., 1913, lxxiv, 1283. [519]

Recent studies on surgery of the pancreas. SEHRT. Med. Klin., Berl., 1913, ix, No. 26.

Lecture on enlargement of the spleen. F. TAYLOR. Clin. J., 1913, xlii, 247.

A case of subcutaneous rupture of the spleen; splenectomy; recovery. MICKHAIOFF. J. d. praticiens, Par., 1913, xxvii, No. 28.

Two cases of primary sarcoma of the spleen. PRINZING. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 2.

Affections caused by echinococcus; echinococcus of the spleen. W. SCHIPATSCHEFF. Chirurgia, St. Petersburg, 1913, xxxiii, 770.

Banti's disease. GRUTZNER. Beitr. z. klin. Chir., 1913, lxxxv, No. 1.

The operative treatment of Banti's disease. TILLMANN. Zentralbl. f. Chir., 1913, xl, 917.

Paludal spleen in pelvic ectopy; splenectomy. CURTILLET, LOMBARD and PÉLISSIER. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 11.

Miscellaneous

The diagnosis of abdominal tumors. SCOBLEW. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 2.

Gunshot wound of the abdomen, followed by septic venous thrombosis of the femoral vein; operation; recovery. W. GRIESS. Lancet-Clin., 1913, cx, 34.

Some acute abdominal perils. J. W. LEECH. Clin. J., 1913, xlii, 231.

The necessity for accurate pre-operative diagnosis and

the methods to be employed in intra-abdominal lesions. H. E. HAYD. Buffalo M. J., 1913, lxviii, 12.

Comparative studies on the value of unpedunculated flaps of omentum, peritoneum and mesentery for the re-enforcement of sutures. SASAKI. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 1 and 2.

Some surgical diseases of the abdomen in children.

BARRETT. Practitioner, Lond., 1913, xci, 65.

Complications and sequelæ of abdominal surgery.

F. F. LAWRENCE. Ohio St. M. J., 1913, ix, 138.

Interesting cases of abdominal surgery. M. HERCZEL. Budapesti Orvosi Ujsäg, Sebénét, 1913, xi, 13.

SURGERY OF THE EXTREMITIES

Diseases of Bones, Joints, Muscles, Tendons— General Conditions Commonly Found in the Extremities

Negative pressure in the long hollow bones of the dog. A critical and experimental contribution on the article of the same title by Ernst O. P. Schultze and B. J. Behau. M. ROTHMANN. München. med. Wchnschr., 1913, lx, 1664.

Anatomical findings in imperfect osteogenesis. KARDAMATIS. Vichow's Arch. f. path. Anat., etc., Berl., 1913, ccxii, 436.

Processes of calcification in healthy and rachitic cartilage. A. HARTMANN. Sitzungsber. d. k. bayer. Akad. d. Wiss., Math.-physikal. Kl., 1913, 271.

Multiplecartilagenous exostoses. LALLEMANT. Fortschr. a. d. Geb. d. Röntgenstr., Hamburg., 1913, xx, No. 5.

X-ray examinations in a case of imperfect osteogenesis. E. FRÄNKEL. Ztschr. f. Röntgenk., 1913, xv, 179.

A typical injury of the medial condyle of the femur. EWALD. München. med. Wchnschr., 1913, lx, No. 30.

Periostitis due to overstrain and spontaneous fractures in the army. WOLF. Deutsche mil.-ärztl. Ztschr., 1913, xlii, No. 14.

Necrosis of the humerus at the middle third, caused by osteomyelitis; false ankylosis of the elbow. CORMIO. Policlin., Roma, 1913, xx, No. 26.

Acute osteomyelitis of the pubes. THOMSCHKE. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 3-4.

The Osgood-Schlatter disease. W. M. MINTZ. Verhandl. d. XII Russ. Chir. Kong., 1913, xii, 201. [520]

Paget's bone disease. P. MARIE and A. LERI. Handb. d. Neurol., 1913, iv, 471. [520]

Sporotrichosis localized in the bones and the lung and simulating tuberculosis. LAURENT. Loire méd., 1913, xxxii, No. 7.

Tuberculosis of bones and joints. G. L. STARR. Am. Med., 1913, viii, 472.

Surgical tuberculosis in children, with suggestions as to a method of treatment. A. H. TUBBY. Lancet, Lond., 1913, clxxxv, 137.

Conservative treatment of surgical tuberculosis. MENNE. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 3-4.

Heliotherapeutic treatment of surgical tuberculosis and tuberculosis of the bronchial glands by the seaside. R. FELTEN and F. STOLTZENBERG. Berl. klin. Wchnschr., 1913, l, 1062.

The out-door treatment of surgical tuberculosis. LOVETT and FISH. Boston M. & S. J., 1913, clxix, 145.

Osteosarcoma of the superior extremity of the tibia. PATEL. Progrès méd., Par., 1913, xlv, No. 29.

Hydatid cysts of the bones. BARDIN. Gaz. d. hôp., Par., 1913, lxxxvi, Nos. 79-80.

So-called osseous cysts. PEREZ. Policlin., Roma, 1913, xx, No. 7.

Osseous surgery and heliotherapy. AIMES. Progrès méd., Par., 1913, xlv, No. 28.

Familial chondrodystrophy. WAGNER. Arch. f. Gynäk., 1913, c, No. 1.

Pseudo-arthritis of the right fibula; scoliosis caused by inequality of the lower limbs. BROGA. Presse méd., Par., 1913, xxi, No. 54.

Diseases of joints and bone marrow. L. ELY. Am. J. Surg., 1913, xxvii, 247. [520]

The pathology of the knee-joint. BÄHR. Deutsche med. Wchnschr., 1913, xxxix, No. 30.

Injuries of the crucial ligaments of the knee-joint. GOETJES. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 3-4.

The pathology and treatment of hallux valgus. A. S. B. BANKART. Med. Press & Circ., 1913, xcvi, 33. [521]

Establishment of the tuberculous nature of arthritic exudates by the specific cutaneous reaction of a tuberculous guinea-pig. R. HAGEMANN. Med. Klin., Berl., 1913, ix, 947.

The conservative treatment of tuberculosis of joints. W. S. FENWICK. Brit. M. J., 1913, ii, 109. [521]

Some remarks on gout, rheumatism, and rheumatoid arthritis. T. M. ALLISON. Clin. J., 1913, xlii, 255.

Vaso-motor phenomena as a premonitory symptom in rheumatoid arthritis. J. LINDSAY. Clin. J., 1913, xlii, 268.

Arthritis catarrhalis (Volkman) during the development of a case of Barlow's disease. WOLFF. Arch. f. Orthop., Mechanothrap. u. Unfallchir., 1913, xii, 376.

A case of paratyphoid arthritis of the heel. J. TILGREN and A. TRÖLL. Wien. klin. Wchnschr., 1913, xxvi, 886.

Myosteoma developing after a diffuse hæmatoma following an injection of serum. DODIEAU. Bull. méd. de l'Algérie, Alger, 1913, xxiv, No. 11.

Myositis ossificans. S. L. McCURDY. Pittsburgh M. J., 1913, i, 32.

A bone encountered in the vastus externus muscle. PRES DE LIMA. Gaz. d. hosp. do Porto, 1913, vii, No. 14.

The operative paralysis of the triangular muscle. T. WALZBERG. Zentralbl. f. Chir., 1913, xl, 1040.

The etiology of the bursitides. A. SCHWARZ. Wien. med. Wchnschr., 1913, lxiii, 1854. [521]

Ossification of the tendon of Achilles. L. MEYER. Berl. klin. Wchnschr., 1913, l, 1304.

Tenoplasty of flexor tendons of fingers. J. B. MURPHY. Surg. Clin. J. B. Murphy, 1913, ii, No. 3.

The relation between gangrene and accidents. DUREK. Monatschr. f. Unfallh. u. Invalidenwes., 1913, xxx, No. 6.

Gangrene of the extremities and its treatment. H. EHRLICH and M. MARESC. Wien. klin. Wchnschr., 1913, xxvi, 1058. [522]

A case of progressive septic and necrotic phlegmon of the hand (hospital gangrene) treated after the method of Pfannenstiel. C. CRONQUIST. Allm. svep. Läkartidn., Stockholm, 1913, x, 769.

Study of the collateral circulation in some cases of spontaneous gangrene of the foot. J. E. THOMPSON. J. Am. M. Ass., 1913, lxi, 171.

Determination of the nutrition limit in gangrene of the foot. SANDROCK. Zentralbl. f. Chir., 1913, xl, No. 27.

Surgical treatment of gangrene of the lower extremities. LIDSKY. *Vrach. Gaz.*, St. Petersburg, 1913, xx, No. 28.

Fractures and Dislocations

Fractures and their treatment. MÜLLER. *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, No. 14.

New treatises on the treatment of fractures. BECKER. *Berl. klin. Wchnschr.*, 1913, l, No. 27.

Massage and mobilization in the treatment of fractures. J. J. CLARKE. *Universal Med. Rec.*, 1913, iv, 1.

Fractures and their treatment. J. A. HUTCHINSON. *Canad. M. Ass. J.*, 1913, iii, 555.

Gourdet's plaster of Paris apparatus with a protected loop in the treatment of complicated fractures. GUYOT and JEANNENEY. *J. de méd. de Bordeaux*, 1913, xliii, No. 30.

Extension treatment of fractures of the upper arm. CHRISTEN. *München. med. Wchnschr.*, 1913, lx, No. 28.

The treatment of fractures of the radius. A. TRÖLL. *Arch. f. klin. Chir.*, 1913, ci, 511.

Fractures of the carpal scaphoid in childhood and in adolescence. W. P. COUES. *Boston M. & S. J.*, 1913, clxix, 81.

Fracture and dislocation of scaphoid and semilunar bones. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

An apparatus for immobilization of the phalanges. LAVERMICOCCA. *Zentralbl. f. chir. u. mechan. Orthop.*, 1913, vii, No. 7.

Fracture of neck of femur; displacement of head on dorsum ilium. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

Separation of the epiphysis from the head of the femur. METZ. *Nederl. Tdschr. v. Geneesk.*, Amst., 1913, xii, No. 26.

Report of eighteen cases of separation of the lower femoral epiphysis at the Boston City Hospital. H. BINNEY. *Boston M. & S. J.*, 1913, clxix, 49. [522]

Diagnosis and treatment of fractures involving the knee-joint. J. B. BLAKE. *Ann. Surg.*, Phila., 1913, lviii, 27.

Rupture of the crucial ligaments of the knee and on fractures of the spine of the tibia. JONES AND SMITH. *Brit. J. Surg.*, 1913, i, 70. [523]

The technique of Steinmann's nail-extension. D. KULENKAMPFF. *Zentralbl. f. Chir.*, 1913, xl, 945.

A new apparatus for fixation and extension. H. WALDENSTRÖM. *Allm. sven. Läkartidn.*, Stockholm, 1913, x, 339.

Spontaneous ruptures of the long extensor tendon of the thumb following typical fractures of the radius; on the so-called drummer's paralysis. HEINECKE. *Deutsche Ztschr. f. Nervenhe.*, 1913, xlvii, Festschr. v. Strümpell, 229.

Subcoracoid dislocation of humerus with separation of tuberosity. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

A rare case of intercarpal luxation. MAYERSBACH. *Deutsche Ztschr. f. Chir.*, 1913, cxiii, Nos. 1-2.

Central luxation of the femur. HAUDEK. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 30.

Pathological luxation of the hip falsely interpreted as congenital dislocation. FRÖLICH. *Presseméd.*, Par., 1913, xxi, 629.

A rare case of congenital luxation of the knee-joint. WACHTER. *Deutsche Ztschr. f. Chir.*, 1913, cxiii, Nos. 1-2.

Congenital backward luxation of the knee-joint. LAZARRAGA. *Med. Klin.*, Berl., 1913, ix, No. 26.

Dislocation of semilunar cartilage of knee. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

Fracture dislocation about the ankle-joint. R. E. FARR. *St. Paul M. J.*, 1913, xv, 345.

Surgery of the Bones, Joints, etc.

The operative treatment of fractures. W. BARTLETT. *Cleveland M. J.*, 1913, xii, 465.

The open treatment of fractures in general. G. S. FOSTER. *Med. Times*, 1913, xli, 7.

Irreducible malleolar fractures cured with a good functional result by operation. CHAPUT. *Rev. d'orthop.*, Par., 1913, xxiv, No. 5.

Autoplastic graft of fibula into humerus after resection for chondrosarcoma, with observations on bone-grafting. G. E. GASK. *Brit. J. Surg.*, 1913, i, 39. [523]

Free transplantation of fat into bone sinuses. E. KLOPPER. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 499. [523]

Filling of bone cavities with free transplanted fat. KRABBEL. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

Implantation of ivory for the repair of bones and joints. KÖNIG. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

The mobilization of ankylosed joints. R. R. WREDEN. *Verhandl. d. XII Kong. russ. Ärzte, Moscow*, 1913, xii, 196.

Successful plastic operation on the elbow-joint by means of implantation of ivory prothesis. KÖNIG. *München. med. Wchnschr.*, 1913, lx, 1136. [524]

The ulnar longitudinal incision for operations in the region of the volar surface of the wrist-joint and of the hollow of the hand. G. F. VON SAAR and R. SCHWAMBERGER. *Zentralbl. f. Chir.*, 1913, xl, 993. [524]

Arthroplasty of hip; trochanter placed in acetabulum to form new joint. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

The end results of excision of the knee for tuberculosis with and without the use of bone plates. R. B. OSGOOD. *Boston M. & S. J.*, 1913, clxix, 123. [524]

End results obtained with Lexer's arthrodosis of the ankle-joint. SCHEWANDIN. *Arch. f. klin. Chir.*, 1913, ci, No. 4.

The effect of operations on the bony skeleton of the foot upon the growth and function of the foot. HAHN. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 2.

The surgical method of correcting contracture of the toes. PUTTI. *Riv. osp.*, Roma, 1913, iii, No. 12.

An analysis and study of 724 major amputations. W. L. ESTES. *Ann. Surg.*, Phila., 1913, lviii, 39.

Amputation of the arm and its shoulder girdle (amputation interscapulo-thoracica) in certain forms and recurrences of carcinoma of the breast. FRANKE. *Deutsche Ztschr. f. Chir.*, 1913, cxiii, Nos. 1-2.

Amputation of thigh in patient 108 years of age, followed by recovery. F. S. CLINTON. *J. Okla. St. M. Ass.*, 1913, vi, 93.

Amputation following traumatic transverse myelitis. O. S. RITCH. *N. Eng. M. Gaz.*, 1913, xlviii, 378.

Repair of finger-joints by implantation of toe-joints. R. GÖBEL. *München. med. Wchnschr.*, 1913, lx, 1598.

Free autoplastic transplantation of a phalanx from the toe to the left ring finger in a case of giant-cell sarcoma of the middle phalanx. STEVERS. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

Transplantation of tendons into the thumb joint for contracture of the fingers of inflammatory origin. PLATONOFF. *Voienno-med. J.*, St. Petersburg, 1913, ccxxvii, June.

Free transplantation of periosteum. E. SCHEPELMANN. *Arch. f. klin. Chir.*, 1913, ci, 499. [524]

A case of free transplantation of half a joint. PETRASCHESKA. *Verhandl. d. wiss. Ver. d. Ärzte. d. städt. Obuchow-Krankh., St. Petersburg., 1913, xxii, 41.* [525]

Orthopedics in General

Orthopedic surgery. A. H. TUBBY. *Practitioner, Lond., 1913, xci, 88.*

A textbook on operative orthopedics. O. VULPIUS and A. STOFFEL. *Stuttgart: Enke, 1913.*

Practical progress in orthopedic surgery. J. K. YOUNG. *Dela. St. M. J., 1913, iv, 1.* [525]

Orthopedics and its employment, in particular following serious operations. TIMOGIEF. *Voenno-med. J., St. Petersburg., 1913, ccxxxvii, July.*

Congenital osteopsathyrosis. BAMBERG and HULD-SHINSKY. *Jahrb. f. Kinderh., 1913, lxxviii, No. 1.*

The pathology of idiopathic osteopsathyrosis. ZESAS. *Deutsche Ztschr. f. Chir., 1913, cxxii, Nos. 3-4.*

Partial defect of the sacrum, congenital pes varus, talipes equinus and vagus talus, malformation of the anus, paralytic symptoms, bilateral luxation of the coxa, and microcephaly. RENDU and VERRIER. *Rev. d'orthop., Par., 1913, xxiv, No. 5.*

A study of congenital dislocation of the hip with report of six cases. C. L. WASHBURN. *Physician & Surg., 1913, xxxv, 306.* [525]

Multiple congenital osteochondromata with degeneration of cranial nerves and muscular dystrophy; report of case. T. R. BOGGS. *Bull. Johns Hopkins Hosp., 1913, xxiv, 210.*

The familial occurrence of polydactylia and syndactylia. VOGEL. *Fortschr. a. d. Geb. d. Röntgenstr., Hamburg, 1913, xx, No. 5.*

Extrodactylia of the right foot. VEAU and LAMY. *Rev. d'orthop., Par., 1913, xxiv, No. 5.*

Recent studies on flat-foot and pes valgus. PELTESOHN. *Med. Klin., Berl., 1913, ix, No. 29.*

The physiological treatment of flat-foot. J. TESCHNER. *Med. Rec., 1913, lxxxiv, 63.*

Results obtained with Müller's operation for flat-foot. MÜLLER. *Beitr. z. klin. Chir., 1913, lxxv, No. 2.*

An operation for flat-foot. W. P. CARR. *Am. J. Surg., 1913, xxvii, 270.* [525]

A modified combined plaster of Paris and court-plaster dressing for the treatment of club-foot. SPRENGEL. *München. med. Wchnschr., 1913, lx, No. 27.*

Treatment of congenital club-foot. S. L. MCCURDY. *Pittsburgh M. J., 1913, i, 29.*

SURGERY OF THE SPINAL COLUMN AND CORD

The correction of fixed scolioses by Abbott's method. GRISEL. *Rev. d'orthop., Par., 1913, xxiv, No. 5.*

The Abbott treatment of rotary lateral curvature of the spine and details of the technique. KLEINBERG. *Surg., Gynec. & Obst., 1913, xvii, 32.* [526]

Scoliosis and chronic appendicitis. MAYET. *Paris chir., 1913, v, No. 4.*

Ankylosis of the spine. A. MCGLANNAN. *J. Alumni Ass. Coll. Physicians & Surg., Balt., 1913, xvi, 47.* [526]

Post-traumatic spondylitis or Kümmel's disease. CESTAN. *Toulouse méd., 1913, xv, No. 12.*

A clinical contribution on rhizomelic spondylosis. Policlin., *Roma, 1913, xx, No. 7.*

Aspiration of a case of spina bifida. M. E. BOLTON. *Mass. M. J., 1913, No. 6, 211.*

Graft of a part of the tibia upon the dorsal part of the spinal column in the treatment of Pott's disease. ALBEE. *Rev. de chir., Par., 1913, xxxiii, No. 7.*

Bone transplantation as a treatment of Pott's disease. H. C. ALDRICH. *J. Am. Inst. Homœop., 1913, vi, 28.* [526]

Methods of localization of spinal tumors with reference to their medical and surgical treatment. E. CASTELLI. *Med. Rec., 1913, lxxxiv, 1.* [526]

Enchondroma of the vertebral column. VALENTIN. *Beitr. z. klin. Chir., 1913, lxxiv, No. 1.*

Fractures of the fifth lumbar vertebra caused by compression. LEWANDOWSKY. *Med. Klin., Berl., 1913, ix, No. 26.*

Clinical case report of fractured vertebræ. F. C. KINSEY. *J. Mich. St. M. Soc., 1913, xii, 375.*

Spontaneous reduction of a dislocation of a cervical vertebra. W. C. BENTALL. *Brit. M. J., 1913, ii, 69.*

Transperitoneal operation on the vertebræ. W. MÜLLER. *Verhandl. d. Gesellsch. deutscher Naturf. u. Ärzte, 1913, ii, 181.*

The vertebral canal in the lumbar region in man. BAUDOUIN. *Arch. prov. de chir., Par., 1913, xxii, No. 5.*

A case of death following lumbar puncture. REUSCH. *Med. Klin., Berl., 1913, ix, No. 26.*

Tumor of the cauda equina. B. LICHTENBERGER. *Budapesti Orvosi Ujság, 1913, xi, 65.*

SURGERY OF THE NERVOUS SYSTEM

The theory of the chromaffin system. (Adnexa of the sympathetic nerve.) JACHONTOFF. *Russk. Vrach, St. Petersburg., 1913, xii, 527.*

Spastic paralysis of childhood and its treatment. K. BIESALSKI. *Deutsche med. Wchnschr., 1913, xxxix, 699.* [527]

The end results of operative treatment in thirty-three cases of spastic paralysis. H. E. HARRIS. *Boston M. & S. J., 1913, clxix, 82.* [527]

Experiences with the Stöffel operation for spastic paralysis. G. HOHMANN. *München. med. Wchnschr., 1913, lx, 1368.* [527]

Paralysis of the recurrent nerve in mediastinitis.

A. ADAM. *Arch. f. Laryngol. u. Rhinol., 1913, xxvii, 430.*

Recklinghausen's disease and the suprarenal capsules. BOSQUET. *Écho méd. du nord, Lille, 1913, xvii, No. 28.*

Neuroma of the right cervical sympathetic ganglion. FREUND. *Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 2.*

Results of nerve suture. H. STRÖBEL and KIRSCHNER. *Beitr. z. klin. Chir., 1913, lxxviii, 475.* [527]

Exposure of the bronchial plexus with nerve transplantation. H. K. TUTTLE. *J. Am. M. Ass., 1913, lxi, 15.*

Nerve plexus grafts. M. KATZENSTEIN. *Berl. klin. Wchnschr., 1913, i, 1165.* [527]

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

- Burns treated after Rövsiing's method. WULFF. München. med. Wchnschr., 1913, lx, No. 30.
- The treatment of granulating wounds. WITTEK. München. med. Wchnschr., 1913, lx, No. 30.
- The treatment of granulating wounds. BAUER. München. med. Wchnschr., 1913, lx, No. 28.
- The treatment of fresh wounds and of severe burns. SCHÖNE. Med. Klin., Berl., 1913, ix, No. 26.
- Surgical aspects of furuncles and carbuncles. P. G. SKILLERN. Penn. M. J., 1913, xvi, 790.
- Chronic glanders of the skin and the joints. R. O. STEIN. Arch. f. Dermat. u. Syph., Prag., 1913, cxvi, 804.
- Report of interesting bacteriological finding in a case of pemphigus. HENDRY. Surg., Gynec. & Obst., 1913, xvii, 85. [529]
- Perforating plantar disease. MAUCLAIRE. Clinique, Par., 1913, viii, No. 27.
- Operative treatment of decubitus of the heel. LEDDERHOSE. Monatschr. f. Unfallh. u. Invalidenwes., 1913, xx, No. 6.
- Clinical findings in X-ray ulcers. W. HAGER. Strahlentherapie, 1913, ii, 642.
- The treatment of varicose ulcer by simple starched gauze dressing. WERTHEIMER. München. med. Wchnschr., 1913, lx, No. 27.
- Radiotherapeutic treatment of varicose ulcers. BIRAUD. J. sc. et méd. de Poitiers, 1913, v, No. 6.
- Treatment of chronic ulcers of the leg, with special reference to symptomatology and diagnosis. E. ADAMS. Internat. J. Surg., 1913, xxvi, 251.
- Histogenesis of multiple carcinoma of skin. L. LOEB and W. O. SWEET. J. Med. Research, 1913, xxiii, No. 2. [529]
- Prevention and treatment of cancer of the skin. M. F. ENGMAN. Med. Herald, 1913, xxxii, 7.
- On tunnel and caterpillar skin grafting. A. MACLENNAN. Practitioner, Lond., 1913, xci, 79.
- The free transplantation of fat. E. KLOPPER. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, 458.
- Free fascial transplantation; experimental investigations. M. JOFFE. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, 466. [529]
- Free transplantation of fascia. P. KORNEW. Beitr. z. klin. Chir., 1913, lxxxv, 144. [530]
- A radical treatment of ingrown toe-nail. T. L. DEEVER. Am. J. Surg., 1913, xxvii, 248.

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

- Tumors. W. F. COUNCILMAN. St. Paul M. J., 1913, xv, 317.
- Recent studies on tumors. LISSAUER. Med. Klin., Berl., 1913, ix, No. 28.
- Predisposition to tumors. GOLDZIEHER and ROSENTHAL. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- The influence of innervation on the growth of tumors. ASCHNER. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- Multiple primary malignant tumors. KROKIEWICZ. Wien. klin. Wchnschr., 1913, xxvi, No. 29.
- Factors in production and growth of tumor metastases. E. E. TYZZER. J. Med. Research, 1913, xxiii, No. 2. [530]
- Experimental cancer studies. H. W. NOWELL. N. Eng. M. Gaz., 1913, xlviii, 343.
- Etiology of cancer. W. L. BROSIUS. Med. Herald, 1913, xxxii, 7.
- The biology of cancer. ABRAMOWSKI. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- The importance of lues as a cause of cancer. LEDERMANN. Wien. klin. Rundschau, 1913, xxvii, No. 26.
- A case of epithelioma grafted upon an ulcerated syphilitic gumma. CAMERA. Riv. osp., Roma, 1913, iii, No. 12.
- Arsenic cancer. W. H. NUTT, J. M. BEATTIE and R. J. PYE-SMITH. Lancet, Lond., 1913, ii, 210.
- Concerning Fibiger's article on "Experimental production of true cancer." VON WINIWARTER. Scalpel et Liège méd., lxv, No. 49.
- Disturbances in the metabolism of albumin in cancerous subjects. SAXL. Wien. med. Wchnschr., 1913, lxiii, No. 28.
- Researches on a nematode and its power of producing papillomatous and carcinomatous tumors. FIBIGER. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- Experiments on mouse carcinoma. ERHARDT. München. med. Wchnschr., 1913, lx, No. 27.
- Observations in an endemic of small mouse-cancer. HENKE. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- Remarks on multiplicity of carcinomata, based on a case of triple carcinoma. GÖTZE. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- May carcinoma heal spontaneously? THEILHABER. Deutsche med. Wchnschr., 1913, xxxix, No. 27.
- The present results of surgical treatment of cancer. DUPUY DE FRENELLE. Paris chir., 1913, v, No. 4.
- The malignancy of giant-celled sarcoma. J. CLARK STEWART. Surg., Gynec. & Obst., 1913, xvii, 30. [530]
- Paraffinomata. BENEDER. Pest. med.-chir. Presse, 1913, xlix, No. 27.
- Experiments on mammalia respecting the production of artificial blastomata. REINKE. Ztschr. f. Krebsforsch., Berl., 1913, xiii, No. 2.
- Shock. A. W. COLCORD. Internat. J. Surg., 1913, xxvi, 251.
- The kinetic theory of shock and its prevention through anoci-association. GEORGE W. CRILE. Lancet, Lond., 1913, clxxxv, 7.
- The process of digestion illustrated by the action of stains on the living tissues. E. E. GOLDMANN. Lancet, Lond., 1913, clxxxv, 69.
- Tetanus; report of case; three days' incubation. M. CASPER. Ky. M. J., 1913, xi, 599.
- A case of tetanus. SAENZ. Rev. de med. y cir. pract., Madrid, 1913, xxxvii, No. 1272.
- Unusual cases of hyatid disease. J. RAMSAY. Australas. M. Gaz., 1913, xxxiii, 587.
- Some unusual cases of hyatid disease. H. M. O'HARA. Australas. M. Gaz., 1913, xxxiv, 1.
- A case of sporotrichosis. H. HECHT. Arch. f. Dermat. u. Syph., Prag., 1913, cxvi, 846.
- Sporotrichoses. GOUGEROT. Clinique, Par., 1913, viii, No. 30.
- Diseases of glands with internal secretion. W. FALTA. Berlin: Springer, 1913. [530]

Classification of the glands of internal secretion and the products which they secrete. GLEY. *Presse méd.*, Par., 1913, xxi, No. 60.

Polyglandular syndromes; juvenile diabetes; tumor of the hypophysis and infantilism. SAINTON and ROL. *Rev. neurol.*, Par., 1913, xxi, No. 12.

The responsibility of the surgeon in the matter of operations. MAXWELL. *Par. méd.*, 1913, No. 30.

Cosmetic operations. EITNER. *Wien. med. Wchnschr.*, 1913, lxiii, No. 28.

A mechanistic theory of disease. GEORGE W. CRILE. *J. M. Soc. N. J.*, 1913, x, 59.

Sera, Vaccines, and Ferments

The serum diagnosis of tubercle. V. B. NESFIELD. *Indian M. Gaz.*, 1913, xlviii, 256.

The diagnosis of malignant new-growths and of pregnancy by Abderhalden's method. GAMBAROFF. *München. med. Wchnschr.*, 1913, lx, No. 30.

Serum reaction after the method of Abderhalden. LICHTENSTEIN. *München. med. Wchnschr.*, 1913, lx, No. 26.

Serological examination by the aid of Abderhalden's dialytic method in healthy and diseased subjects; studies on the specificity of the protective ferments. LAMPE and PAPAZOLU. *München. med. Wchnschr.*, 1913, lx, No. 26.

Experimental researches on the specificity of the proteolytic ferments of Abderhalden. FRANK and ROSENTHAL. *München. med. Wchnschr.*, 1913, lx, No. 26.

The nature of the active ferment in Abderhalden's reaction. STEISING. *München. med. Wchnschr.*, 1913, lx, No. 28.

Wasserman reaction with normal rabbit serum. KOLMER and CASSELMAN. *J. Med. Research*, 1913, xxiii, No. 2.

The quantitative amino (NH_2) nitrogen content of syphilitic and nonsyphilitic serums. D. M. KAPLAN. *N. Y. M. J.*, 1913, xcvi, 157.

Complement fixation in syphilis, with spirochæta antigens. W. KOLMER and LAUBAUGH. *J. Med. Research*, 1913, xxiii, No. 2.

Experimental and clinical results with Rosenbach's tuberculin. K. LESSER and H. KÖGEL. *Beitr. z. Klin. d. Tuberkul.*, 1913, xxvii, 103. [532]

The treatment of surgical tuberculosis by means of Rosenbach's tuberculin. MEYER. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

Some phases of vaccine therapy. E. H. EASTMAN. *J. Ark. Med. Soc.*, 1913, x, 47.

Vaccine treatment in acute and chronic infective disease. A. ROSS. *Practitioner*, Lond., 1913, xci, 96.

The treatment of cancer patients by vaccination. C. LEWIN. *Therap. d. Gegenw.*, 1913, liv, 253. [532]

Immunizing treatment in malignant tumors. KÖNIGSFELD. *Med. Klin.*, Berl., 1913, ix, No. 27.

The duration of passive immunity against tetanus toxin. E. H. RUEDIGER. *Philippine J. Sc.*, 1913, viii, 139. [533]

The reaction of deviation of the complement in gonorrhœal affections. ROMANOFF. *Kharkov. med. J.*, 1913, xv, No. 4.

Anaphylaxis in the diagnosis of cancer. J. L. RANSOFF. *J. Am. M. Ass.*, 1913, lxi, 8.

Blood

The history and origin of the leucocyte. H. D. McCULLOCH. *Med. Press & Circ.*, 1913, xcvi, 115.

Changes produced in the leucocytes of rabbits under the influence of cultures of staphylococci of various degrees of

virulence. W. J. GLINTSCHIKOFF. *Virchow's Arch. f. path. Anat.*, etc., Berl., 1913, ccxii, 461.

The leucocyte count in gas and ethyl chloride anæsthesia. GUY and REID. *Med. Press & Circ.*, 1913, xcvi, 90.

Substances contained in the blood which possess the property of decreasing the caliber of the blood vessels in certain surgical affections. TROUSSOFF. *Vrach. Gaz.*, St. Petersburg, 1913, xx, No. 26.

The clinical determination of vaso constrictive substances in the blood. GUBAR. *Russk. Vrach.*, St. Petersburg, 1913, xii, 725.

The diagnostic value of the viscosity of the blood in surgical affections. FRISCHBERG. *Chirurgia*, St. Petersburg, 1913, xxxii, 623.

The diagnostic value of the determination of the viscosity of the blood in surgical affections. D. FRISCHBERG. *Ztschr. f. Chir.*, 1913, cxxiii, 346.

A quantitative estimation of chlorides in the blood. A. W. OVERBECK-WRIGHT. *Indian M. Gaz.*, 1913, xlviii, 254.

The occurrence of tubercular bacilli in the circulating blood. A. ROTHACKER and CHARON. *Zentralbl. f. Bakteriol.*, 1913, lxix, 478.

Complement content of blood in malignant disease. T. ORDWAY and E. KELLERT. *J. Med. Research*, 1913, xxiii, No. 2. [533]

Local eosinophilia. BABONNEIX. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 84.

Is there a genuine hæmatogenous icterus? MCNEE. *Med. Klin.*, Berl., 1913, ix, No. 28.

The effect of hematin on the circulation and respiration. BROWN and LOVENHART. *J. Exp. Med.*, 1913, xviii, 107.

Diagnosis of internal hæmorrhages. SKŁODOWSKI. *Zentralbl. f. inn. Med.*, 1913, xxxiv, 636.

Various methods in use for the discovery of occult hæmorrhage. HALLEZ. *Arch. d. mal. de l'appareil digest. et de la nutr.*, Par., 1913, vii, No. 7.

Neurotic hæmorrhages. HART. *Frankf. Ztschr. f. Path.*, Wiesb., 1913, xiii, No. 2.

The rational treatment of hæmorrhagic affections of children. L. KERR. *Merck's Arch.*, 1913, xv, 222.

The successful treatment of hæmophilic hæmorrhages by the thermocauter. MEYER. *München. med. Wchnschr.*, 1913, lx, No. 28.

Thrombosis. HANSER. *Virchow's Arch. f. path. Anat.*, etc., Berl., 1913, ccxiii, No. 1.

Traumatic thrombosis of the inferior vena cava with respect to life insurance. WEBER. *München. med. Wchnschr.*, 1913, lx, No. 26.

Post-operative thrombophlebitis. W. D. HAINES. *Lancet-Clin.*, 1913, cx, 87.

Arterial air embolism and the technique of artificial pneumothorax. F. JESSEN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1245.

Fatty embolisms: the fatty embolism of the brain. NAVILLE and FROMBERG. *Arch. de méd. expér. et d'anat. path.*, Par., 1913, xxv, No. 4.

Transfusion of blood. TUFFIER. *J. méd. franc.*, Par., 1913, vii, No. 7.

Direct transfusion of blood. WERNECK. *Brazil med.*, Rio de Janeiro, 1913, xxvii, Nos. 25-26.

Prolonged intravenous infusions. M. FRIEDMAN. *München. med. Wchnschr.*, 1913, lx, 1022. [533]

Severe intestinal hæmorrhage in a case of typhoid fever, controlled by the intravenous injection of fresh human blood. OLIVIER. *Paris méd.*, 1913, No. 32.

Affections of the hæmatopoietic apparatus; also a contribution on tumors of the mediastinum. NICOL. *Beitr. z. path. Anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 3.

Blood and Lymph Vessels

The relations of the inferior vena cava to the organs of the pelvic cavity. BOURCOURT. Paris méd., 1913, No. 34.

Aneurism of the posterior tibial artery, rupture of the sac; operation by the Matas method. PRIMROSE and ARCHIBALD. Canad. M. Ass. J., 1913, iii, 583.

The rôle played by the veins in arterio-venous aneurisms. NEY. Chir. arch. Veliaminova, St. Petersburg, 1913, xxix, No. 3.

The question of the employment of vessel suture in the treatment of aneurisms. TSCHERNIAKOVSKI. Deutsche Ztschr. f. Chir., 1913, cxxiii, Nos. 1-2.

Chronic thoracic aortitis, symmetrical arteritis of the tibial arteries, resulting in gangrene. MATTEI and REBOUL-LACHAUX. Marseille méd., 1913, I, No. 14.

Phlebitis. D. DUCKWORTH. Practitioner, Lond., 1913, xci, 1.

The medical treatment of phlebitis. H. VAQUEZ. Med. Press & Circ., 1913, xcvi, 88.

Treatment of varicose veins of the lower limbs by means of sapheno-femoral anastomosis. LENORMANT. Presse méd., Par., 1913, xxi, No. 54.

Treatment of varices with spiral incision. H. GEINITZ. München. med. Wchnschr., 1913, lx, 1257. [533]

The treatment of wounds of the large arteries, more especially those which are produced by bullets of small caliber. WEISS. Paris méd., 1913, No. 31.

Repair of a portion of the abdominal aorta by the carotid artery of the same animal. E. JEGER and H. JOSEPH. Arch. f. klin. Chir., 1913, ci, 535.

A case of extensive lymphosarcoma cured by operation. I. WILHEIM. Budapesti Orvosi Ujság., Sebészeti, 1913, xi, 22.

Ionization in the treatment of chronic adenitis. BEAUCHAMP and GOLDELWSKI. Sud méd., Marseille, 1913, xlv, No. 1962.

Poisons

The bacteriology of calf lymph. H. TEBBUTT. Australas. M. Gaz., 1913, xxxiv, 77.

A case of streptococcic septicaemia. BALDACCI. Gazz. d. osp. e d. clin., Milano, 1913, xxxiv, No. 81.

A case of septicaemia caused by pyocyaneus. T. INOKUCHI. Nippon-Geka-Gakkai-Zasshi, 1913, xiv, 21.

A case of staphylococcia. SAROLEA. Scalpel et liège méd., 1913, lxxv, No. 52.

Coli sepsis. L. FEJES. Beitr. z. klin. d. Infektionskrankh. u. z. Immunitätsforsch., 1913, i, 575. [534]

Communication of cutaneous germs by the knife. STEINEGGER. Zentralbl. f. Chir., 1913, xl, No. 26.

Surgical Therapeutics

Tetanus and Baccelli's treatment. DI MONTE. Policlin., Roma, 1913, xx, No. 27.

The treatment of tetanus in general and especially after the method of Baccelli. GULAEW. Policlin., Roma, 1913, xx, No. 27.

A case of tetanus cured after the method of Baccelli. RABITTI. Policlin., Roma, 1913, xx, No. 27.

Treatment of a case of tetanus according to the method of Baccelli. LEPORE. Policlin., Roma, 1913, xx, No. 27.

Case of tetanus cured by Baccelli's procedure of subcutaneous injection of phenic acid. PICCALUGA. Policlin., Roma, 1913, xx, No. 27.

Carbolic acid treatment of tetanus. RIGHI. Policlin., Roma, 1913, xx, No. 27.

Salicylic acid and carcinoma. NETOLITZKY. Wien. med. Wchnschr., 1913, lxiii, No. 27.

Experimental researches on the treatment of bacteriæmia by intravenous injection of sublimatin. SCHLOWSKY. Russk. Vrach, St. Petersburg, 1913, xii, 732.

Bolus alba. BURMEISTER. Zentralbl. f. Chir., 1913, xl, No. 29.

Hexamethylenamine in surgery. A. C. BURNHAM. Med. Rec., 1913, lxxxiv, 1. [534]

Hexamethylenamine in the treatment of infection in the bowel and bile tract and to prevent post-operative tympany. P. LA ROQUE. Therap. Gaz., 1913, xxix, 457.

Saturated bismuth injections. RECLUS. J. d. praticiens, Par., 1913, xxvii, No. 30.

The decalcifying action of oxalic acid. T. MILLER. Lancet, Lond., 1913, ii, 220.

The use of opium in gangrene. G. W. GAY. Therap. Gaz., 1913, xxix, 457.

Electrology

Improved X-ray apparatus employing alternating current. (Dessauer's "Reformapparat.") DESSAUER. Zentralbl. f. Röntgenstr., Radium u. verw. Geb., 1913, iv, 233.

Radiography and occupational accidents. DUCHAMP. Loire méd., 1913, xxxii, No. 7.

The X-ray and its possibilities in scientific research. R. H. PEPPER. W. Va. M. J., 1913, viii, 16.

Removal of foreign bodies under the control of radiocopy. MAUCLAIRE. Arch. gén. de chir., Par., 1913, vii, No. 6.

Radio-active substances and their therapeutic employment. WALTER. Fortsch. a. d. Geb. d. Röntgenstr., Hamburg, 1913, xx, No. 3.

Twenty-one new cases of radicular radiotherapy. ZIMMERN, COTTENOT and DARIAUX. Arch. d'électr. méd., expér. et clin., Bordeaux, 1913, xxi, No. 361.

The present status of röntgenotherapy in surgical tuberculosis. M. L. KARLIN. Chirurgia, St. Petersburg, 1913, xxviii, 633.

Conservative surgery from a röntgenologic standpoint. C. JACKSON. Am. Quart. Röntgenol., 1913, iv, 209. [534]

Treatment of cicatricial stenosis by means of electricity. POUCCÉ. Marseille méd., 1913, I, No. 13.

Radiology of carcinoma. LAZARUS. Berl. klin. Wchnschr., 1913, I, No. 28.

Experiences with radium treatment of malignant tumors. EXNER. Wien. med. Wchnschr., 1913, xxvi, No. 29.

The combined chemical and X-ray treatment of malignant tumors. SEELIGMANN. Deutsche med. Wchnschr., 1913, xxxix, No. 27.

Anatomical findings in carcinomata treated by means of mesothorium and Röntgen rays. HÄNDL. Arch. f. Gynäk., 1913, c, No. 1.

The physiological and therapeutic action of the derivatives of thorium. DE NOBELE. Arch. d'électr. méd., expér. et clin., Bordeaux, 1913, xxi, No. 361.

The most important causes of injuries due to electricity. H. ZANGGER. Naturwissenschaften, 1913, i, 375.

The treatment of surgical tuberculosis by means of artificial light. HAGEMANN. Deutsche med. Wchnschr., 1913, xxxix, No. 30.

Marine cure and heliotherapy. CONSTANTIN. Arch. méd.-chir. de Province, Poitiers, 1913, viii, No. 6.

Military and Naval Surgery

Military surgery. G. M. VLECH. Am. J. Surg., 1913, xvii, 259.

Demonstrations in military surgery. WIDERÖE. Norsk Mag. f. Lægevidensk., Christiania, 1913, lxxiv, No. 7.

Modern military surgery. H. KÜTTNER. Post-Graduate, 1913, xxviii, 605.

Some new helpful means in military surgery on the field.
MERMIGAS. Deutsche mil.-ärztl. Ztschr., 1913, xlii, 464.
 Abdominal wounds produced by modern fire-arms.
SALINARI. Clin. chir., Milano, 1913, xxi, No. 6.
 Dressing and transport of the wounded in naval warfare.

BARTHÉLEMY. Arch. de méd. et de pharm. mil., Par., 1913, xcix, June.
 Wounds by fire-arms, especially by the "Nagan" revolver.
ILINSKY. Voïenno-med. J., St. Petersburg, 1913, ccxxxvii, July.

GYNECOLOGY

Uterus

Histological diagnosis of tumors of the uterus. **SCHOTT-LÄNDER.** Arch. f. Gynäk., 1913, c, No. 1.
 Chorio-epithelioma. **C. B. KINYON.** Internat. J. Surg., 1913, xxvi, 237.
 The question of cancer of the uterus. **F. H. MARTIN.** Med. Herald, 1913, xxxii, 7.
 Statistical contribution on the morphology of uterine carcinoma. **J. OBATA.** Arch. f. Gynäk., 1913, xcix, 474. [535]
 The clinical position of carcinoma of the corpus uteri. **WEIBEL.** Arch. f. Gynäk., 1913, c, No. 1.
 The true prophylaxis against uterine carcinoma; a warning to gynecologists. **BOSSI.** Zentralbl. f. Gynäk., 1913, xxxvii, No. 27.
 The treatment of uterine cancer. **GUIERREZ.** Rev. ibero-am. de cienc. med., Madrid, 1913, xxix, No. 106.
 A comparison of the methods of treatment of carcinoma of the cervix. **P. ST. L. MONCURE.** Virginia Med. Semi-Month., 1913, xviii, 195.
 Surgical treatment of cancer of the uterus. **CAN DELA Y PLA.** Prensa med., la Habana, 1913, iv, No. 6.
 Treatment of cancer with mesothorium emanations. **PINKUSS.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [535]
 Giant cystic myomata. **LINGEN.** Zentralbl. f. Gynäk., 1913, xxxvii, No. 30.
 Röntgenotherapy of uterine fibromyomata. **CALATAYUD COSTA.** J. de radiol., Brux., 1913, vii, No. 2.
 A case of post-operative menstrual cystic hæmatoma. **DE ROUBILLE and ARRIVAT.** Arch. mens. d'obst. et de gynec., Par., 1913, ii, No. 6.
 A consideration of cystic tumors of the uterus of congenital origin. **VAUTRIN.** Ann. de gynec. et d'obst., 1913, x, 352. [536]
 A wire loop for the bloodless amputation of the uterus in vaginal operations. **SELLHEIM.** Zentralbl. f. Gynäk., 1913, xxxvii, No. 26.
 Technique of the amputation of the cervix of the uterus. **BONNEY.** Gynecologie, Par., 1913, xvii, May.
 Hysterectomies, cophorectomies and abdominal salpingectomies. **WERNECK.** Arch. brasil. de Med., 1913, iii, No. 4.
 Hæmorrhage into an angiomatous fibromyoma of the uterus and atheroma of the uterine arteries. **FLETCHER W. SHAW.** J. Obst. & Gynec. Brit. Emp., 1913, xxiv, 22.
 Etiology and organo-therapy of uterine hæmorrhages. **KALLEDEY.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [536]
 The treatment of genital hæmorrhages in woman by means of blood sera. **WEIL.** Gynecologie, Par., 1913, xvii, May.
 New views on menstruation and its time relationship to ovulation. **SCHRÖDER.** Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, No. 1.

An obstinate metrorrhagia. **K. F. L. KAISER.** Nederl. Tijdschr. v. Geneesk., Amst., 1913, No. 18, 1227.
 Endometritis. **J. F. MACKEY.** J. Mo. St. Med. Ass., 1913, x, 11.
 Double uterus and vagina. **C. S. LAWRENCE.** Southern M. J., 1913, vi, 477. [536]
 A case of hour-glass contraction of the uterus. **J. J. LEVIN.** S. African Med. Rec., 1913, xi, 259.
 Uterine prolapse. **ROBERT O. EARL.** St. Paul M. J., 1913, xv, 347.
 Congenital total prolapse of the uterus in a new-born affected with spina bifida. **RADWANSKA.** Gynäk. Rundschau, 1913, vii, No. 14.
 Surgical treatment of prolapse of the uterus and the vaginal walls. **PAUCHET.** Clinique, Par., 1913, viii, No. 28.
 An operation for prolapse complicated by hypertrophy of the cervix. **W. E. FOTHERGILL.** J. Obst. & Gynec. Brit. Emp., 1913, xxiv, 19.
 Procidentia of the uterus and rectum at the age of 27 years, with remarks on the treatment. **DOUGLAS DREW.** Lancet, Lond., clxxxv, 136.
 Procidentia uteri; Murphy's method of fixing the uterus. **J. B. MURPHY.** Surg. Clin. J. B. Murphy, 1913, ii, No. 3. [537]
 The etiology of retrodisplacement in virgins and nulliparæ. **PARISSE.** Gynecologie, Par., 1913, xvii, May.
 A new procedure for the relief of the retroverted uterus. **J. F. KUHN.** J. Okla. St. M. Ass., 1913, vi, 79. [537]
 The treatment of uterine retroflexion. **FRANQUE.** Med. Klin., Berl., 1913, ix, No. 28.
 Review of the literature and case reports of ruptured uterus. **CARL G. DAVIS.** Surg., Gynec. & Obst., 1913, xvii, 51. [537]
 The elimination of the danger of peritonitis in rupture and perforating injuries of the uterus. **SIGWART.** Arch. f. Gynäk., 1913, c, No. 1.
 The uterus of woman, its normal function and its rupture incident to labor. **J. WERBOFF.** Berlin: Karger, 1913. [538]
 An unwritten chapter in gynecology, uterine and adnexal syphilis. **CHASE.** Tex. St. J. Med., 1913, ix, 95.

Adnexal and Periuterine Conditions

The clinical significance of ruptures of follicles in the ovary. **FRANZ COHN.** Arch. f. Gynäk., 1913, xcix, 505. [538]
 Cure of an ovarian cancer with metastases by operation and subsequent X-ray treatment. **VON FRANQUÉ.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [539]
 Endothelioma of the ovary — with report of a case of mesothelioma of the ovary. **E. C. STEINHARTER.** Lancet-Clinic, 1913, cx, 84. [539]
 Successful and combined method of biochemic and X-ray treatment of malignant tumors; cure of a recurrent ovarian sarcoma with metastasis in the spinal column. **L. SEELIGMANN.** Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [539]

Ovarian hæmatoma and ovarian hæmorrhages. K. H. ÖHMANN. *Duodecim*, 1913, xxix, 55. [539]

Experimental researches on the process of cicatrization following ovarian resection. KRAUS. *Clin. chir.*, Milano, 1913, xxi, No. 6.

Pyosalpinx enucleation. FELIX W. GARCIA. *Med. Fortnight.*, 1913, xlv, 251.

Laboratory technique preparatory to pyosalpinx enucleation. ROBRET L. REBER. *Med. Fortnight.*, 1913, xlv, 253.

A method of ventrofixation combined with certain tubal sterilization by means of extra-abdominal displacement. DE WITT STETTEN. *Surg., Gynec. & Obst.*, 1913, xvii, 120. [539]

A new operation for the sterilization of the woman, with a future possibility of restoring the function. BLUMBERG. *Berl. klin. Wchnschr.*, 1913, l, 729. [540]

Treatment of sterility in woman. FUNK-BRENTANO and PLAUCHU. *Riv. internaz. di clin. e terap.*, 1913, viii, 81. [540]

"Pericolic Membrane" of the broad ligament. A. E. HERTZLER. *Surg., Gynec. & Obst.*, 1913, xvii, 60. [540]

The treatment of prolapse of the genitalia caused by anterior dislocation of the uterus by means of suture of the round ligaments to the levatores ani. ABADIA. *Arch. prov. de chir.*, Par., 1913, xxii, No. 5.

Rare distribution of resorbed dermoid contents. A. WOLFF. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [541]

External Genitalia

Septate vagina associated with a single uterus. HOLSTE. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 26.

Colpotomy preliminary to abdominal operations in cases of hæmatocele. LIZCANO. *Siglo med.*, Madrid, 1913, lx, 3107.

Gonorrhœa of the female. J. S. JOHNSON. *Kentucky M. J.*, 1913, xi, 563.

The transperitoneal-vesicular route for the cure of certain operative vesico-vaginal fistulæ. LEGUEU. *Arch. urol. clin. de Necker.*, 1913, i, 1. [541]

Experiences with the vaccine treatment of gonorrhœa in the female. HEYMANN and MOOS. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 623. [541]

Suppuration of the perineum in a subject infected with typhoid bacilli. L. LEVY. *Deutsche med. Wchnschr.*, 1913, xxxix, 1500.

Miscellaneous

X-ray treatment in gynecology. FÜTH. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [542]

X-ray treatment in gynecology. E. RUNGE. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [542]

X-ray therapy. WEITZEL. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [542]

X-ray treatment. HEIMANN. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [543]

Radiotherapy in gynecology. D'HALLUIN. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 26.

The internal secretions as they concern gynecology. S. W. BANDLER. *N. Y. M. J.*, 1913, xcvi, 111.

Tuberculosis of the female genitalia. DI BARTOLO. *Riv. osp.*, Roma, iii, No. 13.

Experimental contribution to the physiology of the female genitalia. O. O. FELLNER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [543]

Imperfect development a factor in genesis of diseases of women. B. S. MOORE. *J.-Rec. Med.*, 1913, lx, 148.

Pelvic pain and backache in women; based on reports of two hundred cases. J. C. SHAW. *Internat. J. Surg.*, 1913, xxvi, 251.

Etiology and treatment of cystitis in women. F. W. GRIFFITH. *Southern M. J.*, 1913, vi, 7.

Cases illustrating certain urinary conditions in women associated with frequent or painful micturition. D. NEWMAN. *Clin. J.*, 1913, xlii, 193. [543]

The atriæ of post-operative infection of the female urinary tract. A. BAUEREISEN. *Ztschr. f. gynäk. Urol.*, Leipz., 1913, iv, 1. [544]

Transverse laparotomy in gynecology. PAUCHET. *Clinique*, Par., 1913, viii, No. 29.

The procedure of imbedding uterus and ovaries in paraffin. LOOPS. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, No. 2.

The use of serum in obstetrics and gynecology. A. MAYER. *Med. Cor.-Bl. d. württemb. ärztl. Landesver.*, 1913, lxxxiii, 261. [544]

The significance of infantilism in obstetrics and gynecology. A. MAYER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [544]

Conservatism in gynecology. HOWARD CANNING TAYLOR. *Am. J. Obst.*, N. Y., 1913, lxviii, 28.

OBSTETRICS

Pregnancy and Its Complications

The thyroid in pregnancy. MARKOE and WING. *Bull. Lying-in Hosp.*, 1913, ix, 96. [545]

The significance of the ductless glands for the metabolism during pregnancy. E. LANDSBERG. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [545]

Abdominal pregnancy with living child. J. S. HORSLEY. *Surg., Gynec. & Obst.*, 1913, xvii, 58. [545]

Bilateral pyosalpinx; ectopic gestation. I. A. ARNOLD. *Internat. J. Surg.*, 1913, xxvi, 249.

Ectopic gestation; report of a case operated upon before rupture. JOHN K. FREEMAN. *Am. J. Surg.*, 1913, xxvii, 266.

Three cases of ectopic pregnancy. LIZCANO. *Siglo med.*, Madrid, 1913, lx, No. 3109.

A case of twin extra-uterine pregnancy. C. H. MULRONEY. *Iowa M. J.*, 1913, xx, 39.

Extra-uterine pregnancy; the importance of violent and repeated crises; supra-uterine hæmatocele. CHAPUT. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xx, No. 6.

The surgical importance of new formations of blood vessels in extra-uterine pregnancy and in abdominal tumors. A. P. GUBAREFF. *J. akush. i jensk. bolez.*, St. Petersburg, 1913, xxviii, 188.

Cystic kidneys and pregnancy. F. HEINSIUS. *Zeitschr. f. Geburtsh. u. Gynäk.*, 1913, lxxxiii, 429.

The relation of pyelitis due to bacillus coli to fecundity. MAYER. *München. med. Wchnschr.*, 1913, lx, No. 27.

Pregnancy and renal affections. SCHLAYER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, No. 1.

Cardiac changes during pregnancy. S. W. SCHEWACHOFF. Arb. a. d. geburtsh.-gynäk. Klin. Prof. Redlich, St. Petersburg, 1913, i, 3. [545]

The relation of cardiac disease to pregnancy, labor, and puerperium. WALTHARD. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [546]

Pregnancy and labor in organic heart disease. O. GRÖNÉ. Allm. sven. Läkartidn., Stockholm, 1913, x, 169. [546]

Ano-vulvar growths during pregnancy. RUDUAX. Clinique, Par., 1913, viii, No. 27.

Pregnancy following acromegaly. KALLEDAY. Zentralbl. f. Gynäk., 1913, xxxvii, No. 28.

A case of intestinal occlusion during gestation. LEVY-KLOTZ, CUNÉO and PINARD. Ann. de gynéc. et d'obst., Par., 1913, x, June.

Myoma operation during pregnancy. VAN DER HOEVEN. Nederl. Mandschr. v. verlosk. en Vrouwenz., 1913, ii, 285. [547]

Myoma, retroflexion, and pregnancy. VON DE VELDE. Nederl. Mandschr. v. verlosk. en Vrouwenz., 1913, ii, 295. [547]

The diagnosis and treatment of eclampsia. GEORGE W. KOSMAK. Bull. Lying-in Hosp., 1913, ix, 129. [547]

Clinical lecture on puerperal eclampsia and its treatment. J. VEIT. Med. Press & Circ., 1913, xcvi, 112.

Two cases of eclampsia cured by means of extract of the hypophysis. A. SCHLOSSBERGER. Deutsche med. Wchnschr., 1913, xxxix, 1046. [547]

A short review of our present knowledge concerning the pathology and etiology of eclampsia. ROBERT T. FRANK. Am. Med., 1913, viii, 482.

Observations on the toxæmias of pregnancy. AMAND ROUTH. Lancet, Lond., 1913, clxxv, 63. [547]

Cæsarean section. HUGH HOLMES CARR. W. Va. M. J., 1913, viii, 11. [548]

The uterine scar following the suprasymphyseal extraperitoneal Cæsarean section. KARL HARTMANN and HERMANN LOESCHKE. Gynäk. Rundschau, 1913, vii, 354. [548]

The present status of the Cæsarean section. EDWARD P. DAVIS. Am. J. Obst., N. Y., 1913, lxxviii, 12.

The chances for subsequent pregnancy after the classical Cæsarean section. VAN DER HOEVEN. Nederl. Mandschr. v. verlosk. en Vrouwenz., 1913, ii, 96. [548]

Cæsarean section performed for vaginal stenosis following an operation for vesico-vaginal fistule. W. BECKMAN. Ztschr. f. gynäk. Urol., Leipzig., 1913, iv, 95. [548]

Suprasymphyseal cervical Cæsarean section. LANGE. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 681. [548]

Cæsarean section on the dead and dying woman. O. KITNER. J. akush. i jensk. boliez., St. Petersburg., 1913, xxxviii, 539. [549]

Technique of Cæsarean section. J. VERT. Zentralbl. f. Gynäk., 1913, xxxvii, 713. [549]

Results obtained with the Cæsarean section in Russia during the last 25 years. N. POBEDINSKY. Zentralbl. f. Gynäk., 1913, xxxvii, 757. [549]

A case of septic abortion. HAMEL. Arch. med.-chir. de Prov., Poitiers, 1913, viii, No. 6.

An attempted abortion in a case of ectopic pregnancy, together with a contribution on violent ruptures of extra-uterine pregnancies. SINGER. Zentralbl. f. Gynäk., 1913, xxxvii, No. 26.

Quinine in the treatment of incomplete abortion. EDWARD ANDERSON. Maryland M. J., 1913, lvi, 172.

Management of miscarriage. L. A. ARNOLD. Kentucky M. J., 1913, xi, 599.

The conservative treatment of abortion and the results obtained. TRAUOGOTT. Med. Klin., Berl., 1913, ix, No. 27.

Labor and Its Complications

Some aspects of labor mechanism at the pelvic brim. A. K. PAINE. Boston M. & S. J., 1913, clxix, 154. [550]

A study of the induction and augmentations of labor pains. WALTER E. WELZ. Am. J. Obst., N. Y., 1913, lxxviii, 1.

Intervention in cases of narrow pelvic inlet. RIBAS. Bol. de med. y cir., Barcel., 1913, xxvii, No. 5.

The treatment of frontal presentation. LEHLE. Münch. med. Wchnschr., 1913, lx, 860. [550]

Some sequelæ of labor. BETHEL SOLOMONS. J. Obst. & Gynec. Brit. Emp., 1913, xxiv, 12.

Tumors of the ovary in their relation to labor and their secondary symptoms. PUECH. Montpellier méd., 1913, xxxvii, Nos. 28-29.

Acute dilatation of the stomach during labor and immediately thereafter. R. DE BOVIS. Semaine med., 1913, xxxiii, 169. [550]

Operative procedures in congenital high dystocia of the shoulder-blade. KÖNIG. Zentralbl. f. Chir., 1913, xl, 1186.

Uterine dystocia, secondary to mitral stenosis. ANNA RIES-FINLEY. Northwest Med., 1913, v, 196. [551]

Puerperium and Its Complications

A pathological condition which appeared during puerperium under the picture of cerebral tumor and eventuated in recovery. PELZ. Berl. klin. Wchnschr., 1913, l, No. 30.

Incidence of malaria in the puerperium. JAMES FREEMAN. Southern M. J., 1913, vi, 7. [551]

A case of puerperal eclampsia. J. L. FLEMING. Therap. Rec., 1913, viii, 208.

Report of a case of puerperal septicæmia. GERTRUDE M. JOHNSON. J. Mich. St. Med. Soc., 1913, xii, 365.

The passage of streptococci into the blood in the septic puerperium. HUSSY. Gynäk. Rundschau, 1913, vii, No. 14.

Post-abortion and post-partum hæmorrhages. SCHECHNER. Med. Klin., Berl., 1913, ix, No. 30.

Ovarian abscess after labor. ÖHMAN. Finska läk.-sällsk. handl., Helingsfors, 1913, lv, 447. [551]

Miscellaneous

Biological diagnosis of pregnancy. ENGELHORN. Zentralbl. f. Gynäk., 1913, xxxvii, 731. [551]

The sero-diagnosis of pregnancy by the dialyzation method. JELLINGHAUS and LOSEE. Bull. Lying-in Hosp., 1913, ix, 68. [552]

The diagnosis of pregnancy by means of the dialytic and optical methods. E. ABDERHALDEN. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [552]

Abderhalden's sero-diagnosis. EVLER. Med. Klin., Berl., 1913, ix, No. 26.

Experiences with the Abderhalden test in the diagnosis of pregnancy. GUTMAN and DRUSKIN. Med. Rec., 1913, lxxxiv, 99.

Abderhalden's pregnancy reaction. A. MAYER. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [552]

Abderhalden's reaction. PERDRIZET. Clinique, Par., 1913, viii, No. 30.

Abderhalden's ferment reaction. P. SCHÄFER. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [552]

The specificity of the placenta splitting ferments of pregnancy serum. PETRI. Zentralbl. f. Gynäk., 1913, xxxvii, 731. [552]

Biological reactions and their importance for obstetrics and gynecology. PETRI. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, No. 1.

The fat and cholesterin-content of the blood in pregnancy and the puerperium under normal and pathological conditions. DECIO. *Ann. di ostetr. e ginéc.*, 1913, xxxv, 281. [553]

Internal secretion and pregnancy. FRAENKEL. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [553]

The proof of the presence of spermatozoa in the cervical canal in two cases of rape eighteen hours after the perpetration of the crime. C. D. JOSEPHSON. *Allm. sven. Läkartidn.*, Stockholm, 1913, x, 345. [553]

Placental bacteræmia. WARNEKROS. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [553]

The location of the placenta. BORDÉ. *Ann. di ostetr. e ginéc.*, 1913, xxxv, 248. [554]

Placenta of giant infants. R. COSTA. *Ann. di ostetr. e ginéc.*, 1913, xxxv, 253. [554]

Intra-uterine sucking. ASCH. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 701. [554]

A young human embryo. ZANGEMEISTER. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [554]

Origin of the amniotic fluid with pathological, experimental and clinical examinations of the function of the foetal kidneys. Leipzig and Vienna: Deuticke, 1913. [555]

The administration of oxygen to the foetus. GEORGE P. SHEARS. *Med. Rec.*, 1913, lxxxiv, 112.

Marked deformity of the limbs of a new-born in consequence of birth from a uterus bicornis unicollis. KALMONOWITSCH. *Gynäk. Rundschau*, 1913, vii, No. 14.

Blennorrhœa of the new-born and its prevention. L. I. BUBLITSCHENKAO. *Med. Rundschau*, 1913, xl, 549. [555]

Interruption of pregnancy and sterilization at a single séance by the abdominal path of access. SELLHEIM. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, No. 2.

On dilatation of the Fallopian tubes for sterility. HOPE T. LEWIS. *Brit. M. J.*, 1913, ii, 70.

The treatment of sterility by intra-uterine stems. REGINALD M. RAWLS. *Am. J. Obst., N. Y.*, 1913, lxviii, 35.

Simple surgical treatment of the umbilical stump. B. NÁDODY. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 765. [556]

A new procedure for the enlargement of the pelvis. G. FREUDENTHAL. *Berl. klin. Wchnschr.*, 1913, i, 688. [556]

Pituitrin in obstetrics. D. G. VON HOYTEMA. *Nederl. Mandschr. v. verlosk. en Vrouwenz.*, 1913, ii, 296. [556]

Pituitary extract in obstetrics. J. M. H. ROWLAND. *Maryland M. J.*, 1913, lvi, 172. [556]

Pituitary extract in uterine inertia. J. CLIFTON EDGAR. *Am. J. Obst., N. Y.*, 1913, lxviii, 20.

A contribution to the study of pituitrin. N. SPROAT HEANEY. *Surg., Gynec. & Obst.*, 1913, xvii, 103. [557]

Surgery in obstetrics. BAISCH. *Klin.-therap. Wchnschr.*, 1913, xx, No. 27.

A study of forceps. ALBAN DORAN. *J. Obst. & Gynec. Brit. Emp.*, 1913, xxiv, 1.

Statistics of a Chinese policlinic. VORTISCH-VAN VLOTEN. *Arch. f. Schiffs. u. Tropen-Hyg.*, 1913, xvii, 253. [557]

GENITO-URINARY SURGERY

Kidney and Ureter

Etiology and technique of operation in struma supranalis cystica hæmorrhagica. H. KÜTTNER. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte.*, 1913, ii, 159.

The suprarenal capsules in cancer of the kidney. DE BERNE-LAGARDE and DE BEAUFOND. *Arch. urol. clin. de Necker*, 1913, i, 72. [558]

Five cases of calculus of the kidney. NEGRETE. *Rev. ibero-am. de cienc. med.*, Madrid, 1913, xxix, No. 106.

Calcified kidney. S. CLARK STEWART. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7.

Report of five cases of nephrolithiasis with special reference to the symptomatology. M. P. WARMUTH. *Pa. M. J.*, 1913, xvi, 792.

On the differential diagnosis of appendicitis and nephrolithiasis. KROTOSZYNER. *Cal. St. J. M.*, 1913, xi, 287. [558]

Four cases of nephrolithiasis. LE CLERK-DANDROY. *Policlin.*, Brux., 1913, xxii, No. 12.

Kidney stone surgery. HERMAN L. KRETSCHMER. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7.

Rare injuries of the kidneys. A. PLÜCKER. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte.*, 1913, ii, 167.

Serious disorganizing injury to the right kidney with very slight primary symptoms. M. H. SEARS. *Denver Med. Times*, 1913, xxxiii, 8.

Congenital defect of the kidney (agenesis renis) associated with uterus bicornis duplex cum vagina septa. GAITSCHMANN. *J. akusch. i jensk. bolez.*, St. Petersburg, 1913, xxviii, 59.

A study of the mechanical obstruction to the circulation of the kidney produced by the experimental acute toxic nephropathy. ALBERT A. GHOREYEE. *J. Exp. Med.*, 1913, xviii, 29. [558]

Unilateral fused kidney. ARTHUR STEIN. *Am. J. Obst., N. Y.*, 1913, lxviii, 43.

An experimental study of unilateral hæmaturia of the so-called essential type. PAYNE and MACNIDER. *Surg., Gynec. & Obst.*, 1913, xvi, 93. [559]

An unusual case of renal hæmaturia; unilateral chronic hæmorrhagic nephritis; decapsulation; apparent cure; recurrence; bilateral involvement; decapsulation of both kidneys six years later. WESLEY GROVE VINCENT. *Med. Rec.*, 1913, lxxxiv, 106.

Renal varix and hyperæmia as causes of symptomless renal hæmaturia. DAVID NEWMAN. *Brit. J. Surg.*, 1913, i, 4. [559]

An interesting case of renal hæmaturia, with three anomalous renal arteries. CHARLES M. HARPSTER. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7.

Embryonal adeno-sarcoma of kidney. JEFFERSON D. BLOOM. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7.

Unilateral polycystic kidney. CHARLES M. BARNETT. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7.

Reconstruction of cystic kidneys, with a contribution on the development of cystic kidneys. FORSMAN. *Beitr. z. path. anat. u. z. allg. Path.*, Jena, 1913, lvi, No. 3.

Further experiences with luetic and post-luetic affections of the kidneys. BAUER. *Wien. klin. Wchnschr.*, 1913, xxvi, No. 27.

The value of pain as a symptom of renal disease. J. SWIFT JOLY. *Clinical J.*, 1913, xlii, 225.

Renal gonorrhoea. CHARLES HARPSTER. *Am. J. Urol.*, 1913, ix, 345.

Pyelitis as a clinical entity. P. I. NIXON. *Southern M. J.*, 1913, vi, 461.

Concerning a form of dull inter-costal neuralgia and its diagnostic value in affections of the renal pelvis. LAPINSKY. *Russk. Vrach.*, St. Petersburg, 1913, xii, No. 23.

Further experiences on the treatment of pyelitis by lavages of the renal pelvis. HOHLWEG. *München. med. Wchnschr.*, 1913, lx, No. 26.

Pyelitis and otitis of the middle ear in nurslings. GLASER and FLIESS. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 30.

Chronic pyelonephritis in an infant. FAIRISE. *Arch. de méd., expér. et d'anat. path.*, Par., 1913, xxv, No. 4.

Pyelotomy. W. ISRAEL. *Ztschr. f. Urol.*, 1913, vii, 524. [559]

Two very painful cases of sclero-adipose perinephritis. NICOLICH. *J. d'urol.*, Par., 1913, iv, No. 1.

Lignous perinephritic phlegmon clinically and etiologically difficult to diagnose. THÈVENOT. *Lyon chir.*, 1913, x, No. 1.

Traumatic nephritis. ZOLLINGER. *Rev. suisse de méd.*, Basle, 1913, xiii, No. 20.

A form of experimental nephritis. J. FRANK CORBETT. *Urol. & Cutan. Rev.*, 1913, xvii, No. 7. [559]

Indications for operation in chronic nephritis. A. POUSSON. *J. d'urol.*, 1913, iii, 717. [560]

The surgical treatment of chronic nephritis. W. M. MYSCH. *Chir. arch. Veliaminova*, 1913, xxix, 419. [560]

The present standpoint in regard to nephritis and nephritis surgery. E. RUGE. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 565. [561]

Chronic nephritis from the point of view of surgery. J. MURARD. *Thèse de Lyon*, 1913. [561]

The physiology of the kidneys and the functional diagnosis of the kidneys in renal surgery and internal medicine. V. BLUM. *Leipzig and Vienna: Deuticke*, 1913. [562]

The early diagnosis of renal tuberculosis. R. C. BRYAN. *N. Y. M. J.*, 1913, xcvi, 1. [563]

Pathology and therapy of renal tuberculosis. KARO. *Terap. Obozrenié*, Odessa, 1913, v, No. 11.

Locating renal tuberculosis by means of radiography. PAPIN. *Arch. urol. clin. de Necker*, Par., 1913, i, No. 2.

Report of a case of renal tuberculosis. G. S. GORDON. *Am. J. Urol.*, 1913, ix, 340.

Three cases of surgical renal tuberculosis in infancy. ORATSON. *J. d'urol.*, 1913, iv, No. 1.

The effect of intravenous injection of acids on the excretion of staining substances through the kidney. OSWALD SCHWARZ. *Arch. f. d. ges. Physiol.*, 1913, cliii, 87.

Functional diagnosis of the kidney. BROMBERG. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 1.

Functional tests of the kidneys and their importance for therapy. ROTH. *Med. Klin.*, Berl., 1913, ix, No. 26.

The uræmic constant of Ambard; the coefficient of the secretion of urea for the determination of the functional value of the kidney. BONANOME. *Policin.*, Roma, 1913, xx, No. 30.

On the use of phthalein to determine the renal function prior to prostatectomy. W. D. HAMILTON. *Lancet-Clin.*, 1913, cx, 33.

The determination of the hæmorenal index in tests of the function of the kidney. R. BROMBERG. *Deutsche med. Wchnschr.*, 1913, xxxix, 1358.

The function of the nerves of the kidneys. E. ROHDE and PH. ELLINGER. *Zentralbl. f. Physiol.*, 1913, xxvii, 12.

Surgery of the kidney. W. E. ALTON. *Iowa M. J.*, 1913, xx, 27.

Cystoscopic diagnosis of ureteral calculus and its removal by the vaginal path of access. HEINSIUS. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 441.

Prolapse of the ureters through the urethra and notes on the histology of oedema bulbosum. FRANQUE. *Monatsschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, Suppl. No.

Some new data on the etiology of hydronephrosis (congenital malformation of the ureter). N. A. MICHAJLOW. *Ztschr. f. Urol.*, 1913, xii, 564.

Contribution to the clinical study of strictures of the ureter; large strictures. DESNOS. *J. d'urol.*, 1913, iii, 739. [563]

Therapeutic catheterization of the ureters. BLUM. *Wien. med. Wchnschr.*, 1913, lxxiii, No. 27.

Cystic dilatation of the vesical end of the ureter. RUMPEL. *Ztschr. f. Urol.*, 1913, vii, 541.

Bladder, Urethra, and Penis

Some remarks on the diagnosis of vesical complications in appendicitis and other lesions of the abdominal viscera. CHARLES CAILLET. *Am. J. Urol.*, 1913, ix, 355.

A case of foreign body in the bladder, removed by suprapubic incision. FÉCHINE. *Vofenno-med. J.*, St. Petersburg, 1913, ccxxxvii, June.

Intraperitoneal rupture of the bladder; laparotomy; recovery. STINCER. *Rev. de med. y cir. de la Habana*, 1913, xviii, No. 12.

Electro-coagulation of tumors of the bladder. LEGUEU. *Arch. urol. clin. de Necker*, Par., 1913, i, No. 2.

A case illustrating the efficiency of the high frequency current in the treatment of tumors of the bladder. J. DELINGER BARNEY. *Boston M. & S. J.*, 1913, clxix, 19. [564]

Cystitis. M. L. WILBANKS. *Tex. Med. News*, 1913, xxii, 1454.

Cystitis: acute and chronic. GEORGE WARFIELD. *Mass. M. J.*, 1913, vii, 253.

A case of cystitis. E. STUVER. *Denver Med. Times*, 1913, xxxiii, 9.

A contribution to the study of ectopia vesicæ. KARL BRANDL. *Am. J. Urol.*, 1913, ix, 333.

A simple procedure for suture of the bladder combined with cystopexy. HACHE. *Arch. méd.-chir. de Prov.*, Poitiers, 1913, viii, No. 6.

Mad's operation in exstrophy of the bladder. KUSTNETZKY. *Pract. Vrach.*, St. Petersburg, 1913, xii, 323.

Applications of chromocystoscopy. PULIDO MARTIN. *Siglo med.*, Madrid, 1913, lx, No. 3110.

Diagnosis and treatment of multiple urethral calculi, with report of unusual case. W. C. STEVENS. *J. Am. M. Ass.*, 1913, lxi, 86. [564]

Stenosis of the urethra and urinary lithiasis. THÈVENOT. *Progrès méd.*, Par., 1913, xlv, No. 26.

Treatment of ruptures of the urethra. WERNECK. *Brazil med.*, Rio de Janeiro, 1913, xxvii, No. 22.

Irreducible traumatic stenosis of the urethra; urethrectomy and urethrorrhaphy; recovery. COCHEZ. *J. d'urol.*, Par., 1913, iv, No. 1.

Treatment of inflammatory stenoses of the urethra by means of electrolytic dilatation. DESMONTS. *Sud méd.*, Marseille, 1913, xlv, No. 1962.

Congenital stricture of the prostatic urethra with bladder hyperplasia, urethral dilatation and multiple abscesses of both kidneys. W. H. JORDAN. *J. Am. M. Ass.*, 1913, lxi, 244. [564]

Lesions of the posterior urethra in urinary neurasthenia. MARSAN. *Arch. urol. clin. de Necker*, Par., 1913, i, No. 2.

Lesions of the posterior urethra during urinary neurasthenia. LEGUEU. *Clinique*, Par., 1913, viii, No. 28.

Gonorrhœal urethritis with complications. J. J. WALKER. N. Mex. M. J., 1913, x, 107.

Abscess of the cavernous part of the urethra. TIMOFEEFF. Chir. arch. Veliaminova, St. Petersburg., 1913, xxix, No. 3.

Internal urethrotomy. FRONSTEIN. Vrach. Gaz., St. Petersburg., 1913, xx, No. 25.

Double epididymic urethras. LEBRUN. J. d'urolog., Par., 1913, iv, No. 1.

Mistaken sex in consequence of penoscrotal hypospadias. ZURHELLE. Deutsche med. Wchnschr., 1913, xxxix, No. 27.

Peritomy. SALZMANN. Wien. med. Wchnschr., 1913, lxxiii, No. 30.

The treatment of acute blennorrhœa. LESHNEV. Terap. Obozrenié, Odessa, 1913, v, No. 11.

Genital Organs

Traumatic total loss of skin of the male sexual organs. K. BELFRAGE. Nord. med. Ark., 1913, xlv, 11. [564]

Gangrene of the scrotum, chancroid and epithelioma of the penis occurring simultaneously in same patient; recovery. W. C. BRYANT. Pittsburgh M. J., 1913, i, 39.

A case of perineo-scrotal dermoid cysts. A. CARLESS. Brit. J. Surg., 1913, i, 39. [564]

Castration and operation for varicocele and hydrocele without wounding the scrotum. C. A. BUCKLIN. Med. Rec., 1913, lxxxiv, 108. [565]

Recurrence of hydrocele after radical treatment. D. TAIT. Calif. St. J. Med., 1913, xi, 258. [565]

The hydrocele operation. MÜLLER. Zentralbl. f. Chir., 1913, xl, No. 29.

Acute orchitis in children. OMBREDANNE. Presse méd., Par., 1913, xxi, No. 59.

Orchidism and prostatitis; the stages of cure. VILLETTE. J. d. sc. méd. de Lille, 1913, xxxvi, No. 26.

Ectopia testis. E. M. ECCLES. Clin. J., 1913, xlii, 241. [565]

Structure and pathogenesis of embryonic teratoma of the testicles. MEYER. Frankf. Ztschr. f. Path., Wiesb., 1913, xiii, No. 2.

Fecundity of patients affected with bilateral tuberculosis of the epididymis. FURBINGER. Deutsche med. Wchnschr., 1913, xxxix, No. 29.

Two cases of spermatic cyst associated with absence of the vas deferens. DE FRANCISCO. Riforma med., 1913, xxix, No. 28.

Operations on the seminal vesicles. VOELCKER. Arch. f. klin. Chir., 1913, ci, No. 4.

Affections of the prostate gland. PORTNER. Med. Klin., Berl., 1913, ix, No. 26.

On the value of cauterization by the high frequency current in certain cases of prostatic obstruction. A. R. STEVENS. N. Y. M. J., 1913, xcvi, 170. [566]

Carcinoma of the prostate. GEBELE. Zentralbl. f. d. Grenzgeb. d. Med. u. Chir., 1913, xvi, 579. [566]

Metastatic carcinoma of the prostate simulating a lymphomatosis. LUNDSGAARD. Virchow's Arch. f. path. Anat., etc., Berl., 1913, ccxiii, No. 1.

Carcinoma of the prostate gland simulating lymphomatosis. LUNDSGAARD. Hosp.-Tid., Kjøbenh., 1913, lvi, No. 27.

Carcinoma of the prostate gland; a study of thirty-three cases. R. J. WILLIAN. Brit. M. J., 1913, ii, 60. [566]

Slight and marked hypertrophies of the prostate. DE GRÄUWE. J. Méd. de Brux., 1913, xviii, No. 26.

Some conditions simulating prostatic hypertrophy. C. WALLACE. Clin. J., 1913, xlii, 209. [567]

The post-operative complications of prostatectomy. HAGNER and FULLER. Surg., Gynec. & Obst., 1913, xvii, 110. [567]

Simplified prostatectomy by the suprapubic way. D. W. BASHAM. Med. Herald, 1913, xxxii, 7.

The technique of suprapubic prostatectomy. BRUNNER. Zentralbl. f. Chir., 1913, xl, No. 28.

Total prostatectomy in the so-called prostatic hypertrophy. GRINENKO. Dissertation, St. Petersburg., 1913. [567]

Prostatectomy in the aged. H. A. MOORE. Interst. M. J., 1913, xx, 648. [568]

Drainage of the bladder in suprapubic prostatectomy. C. MÜLLER. Ztschr. f. urol. Chir., 1913, i, 393.

Miscellaneous

Elimination of errors in the X-ray diagnosis of urinary calculus. H. SHENTON. Lancet, Lond., 1913, clxxxv, 77.

The shortcomings of ordinary clinical data in urological diagnosis. STANTON. Internat. J. Surg., 1913, xxvi, 237.

The presumptive diagnostic value of the specific reaction of the urine in carcinomatosis. BALDONI. Boll. d. sc. med., Bologna, 1913, lxxxiv, No. 6.

Transfusion of blood in profuse urinary hæmorrhages. LEGUEU. J. d'urolog., Par., 1913, iv, No. 1.

Staphylococcal of urinary origin. LEGUEU. Progrès méd., Par., 1913, xlv, No. 30.

The content of colloidal nitrogen in the urine of cancerous subjects. A. P. KONIKOV. Russk. Vrach, St. Petersburg., 1913, xii, 927.

Urolithiasis and bilharziasis. PFISTER. Arch. f. Schiffs- u. Tropen-Hyg., 1913, xvi, 309. [568]

Experiences with arthigon in complications of gonorrhœa. E. FREUND. Wien. med. Wchnschr., 1913, lxxxi, 1550. [569]

The need of the microscope in the treatment of gonorrhœal urethritis and prostatitis. J. BROADMAN. N. Y. M. J., 1913, xcvi, 1.

Serodiagnosis of gonorrhœal affections. J. A. FINKELSTEIN and T. M. GERSCHUN. Russk. J. koshnych i vener. bol'ez., St. Petersburg., 1913, xxv, 272.

A routine method of examination in gonorrhœa in the male as a guide to treatment. F. H. PICKIN. Lancet, Lond., 1913, clxxxv, 76.

The prophylaxis and treatment of gonorrhœa. G. LUND. Med. Fortnight., 1913, xlv, 255.

Urogenital tuberculosis. B. RIHMER. Budapesti Orvosi Ujság., 1913, xi, 119.

Mid-operative diagnosis in urologic operations. G. KOLISCHER. J. Am. M. Ass., 1913, lxi, 174. [569]

Agentialism and hypogenitalism; connective tissue diathesis as a cause of multiglandular disturbances (insuffisance pluriglandulaire). J. WIESEL. Handb. d. Neurol., 1913, iv, 407.

A case of exploded urethrascope lamp; removal of fragment without operation or subsequent symptoms or sequels. V. C. PEDERSON. Med. Rec., 1913, lxxxiv, 158.

SURGERY OF THE EYE AND EAR

Eye

Severe injuries to the eyes and face by so-called water-core and zodiac golfballs. OHLEMANN. *Klin.-therap. Wchnschr.*, 1913, xx, 604. [570]

The importance of accurate diagnosis of affections of the eye. C. KOLLOCK. *J. South Car. M. Ass.*, 1913, ix, 177.

Some remarks upon the diagnosis and treatment of lacrimal affections. S. STEPHENSON. *Clin. J.*, 1913, xlii, 252. [570]

Clinical lecture on the treatment of glaucoma with particular reference to the newer operations. S. STEPHENSON. *Med. Press & Circ.*, 1913, xcvi, 58. [570]

The treatment of tracheoma from a surgical standpoint. DE CARADENC. *J. M. Ass. Ga.*, 1913, iii, 75.

Sarcoma of the iris. J. LOCKHART. *Australas. M. Gaz.*, 1913, xxxiv, 3.

Cylindroma of the lower eyelid, (the nascent type of cylindroma). DUCLOS. *Ann. d'oculist.*, 1913, cxlix, 445.

Capillary angioma of the retina. H. FRENKEL. *J. Ophth., Otol. & Laryngol.*, 1913, xix, 268. [570]

The genesis of orbital cysts and of anomalies of the retina and the choroid which occur in microphthalmus. R. BERGMEISTER. *Arch. f. Ophth.*, 1913, lxxxv, 1.

Some common ocular manifestations secondary to disease of the nose and accessory sinuses. H. H. TURNER. *Pittsburgh M. J.*, 1913, i, 49.

A report of a case of tuberculous ophthalmia. D. V. SMITH. *Physician & Surg.*, 1913, xxxv, 312.

Rare forms of tuberculosis of the eye and the eyelids. BOR. *Arch. f. Ophth.*, 1913, lxxxv, 273.

Parinaud's conjunctivitis; a mycotic disease due to a hitherto undescribed filamentous organism. F. H. VERHOEFF. *Arch. Ophth.*, 1913, xlii, 345. [571]

What the general practitioner should know about gonorrhoeal iritis. R. L. HARREL. *N. Orl. M. & S. J.*, 1913, lxvi, 16.

A case of septic thrombosis of both ophthalmic veins and cavernous sinuses. J. R. MOSSGROVE. *Ohio St. M. J.*, 1913, ix, 329.

Cerebral localization from the standpoint of the oculist. D. T. VAIL. *Lancet-Clin.*, 1913, cx, 60. [571]

The anatomical relation of the sphenoid and posterior

ethmoid cells to the optic nerve. L. H. CLARK. *Hahne-mann. Monath.*, 1913, xlvii, 509.

Retinal detachment. R. KÜMMEL. *Ann. Ophth.*, 1913, xxii, 437.

The technique of opening the lachrymal sac by way of the nose. WEST. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

The technique of intranasal dacryocystostomy. POLIAK. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

Sclerostomy. POOLEY. *Ophth. Rev.*, 1913, xxxii, 202.

Surgical treatment of some eye affections in leprosy. A. HEYMANS. *South African M. Rec.*, 1913, xi, 246.

Ear

Treatment of persistent otorrhœa in infants and young children by the establishment of post-auricular drainage. W. C. PHILLIPS. *Laryngoscope*, 1913, xxiii, 778.

Multiple bilateral papillomata of the external auditory meatus. BLEY. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw.*, 1913, lxviii, 177.

Differential diagnosis and treatment of acute labyrinthitis. L. L. HENNINGER. *Laryngoscope*, 1913, xxiii, 781.

A contribution to the pathogenesis and treatment of pharyngeal collections of otitic origin. M. GUILLEMIN. *Thèse de Nancy*, 1913. [571]

Experimental researches on the effect of bacterial toxins and poisons on the auditory organism. K. BECK. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, Wiesb.*, 1913, lxviii, 128.

Localization of pulmonary metastases in otogenous sinus thrombosis. GANTER. *Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftwege, Wiesb.*, 1913, xlviii, No. 4.

The path of access to the labyrinth after the method of Harris Mosher of Boston. LUC. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par.*, 1913, xxxix, No. 6.

Topography of the tympanic cavity. J. A. CAVANAUGH. *Illinois M. J.*, 1913, xxiv, 11.

The treatment of some acute ear conditions by the general practitioner. C. C. EVES. *Penn. M. J.*, 1913, xvi, 796.

Plastic operation on the ear. J. B. MURPHY. *Surg. Clin. J. B. Murphy*, 1913, ii, No. 3.

SURGERY OF THE NOSE, THROAT, AND MOUTH

The most frequent etiological factor in spontaneous nose-bleeding. MOSKOVITZ. *Wien. med. Wchnschr.*, 1913, lxiii, No. 27.

Two remarkable cases of nasal calculi. HEINEMANN. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 30.

Primary malignant tumors of the naso-pharynx. OPPIKOFER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

A brief pathological study of papillomata with reference to their existence within the nose. R. B. SCARLETT. *Laryngoscope*, 1913, xxiii, 765.

Effective implantation of fibrous tumors of the naso-

pharynx. FALGAR. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par.*, 1913, xxxix, No. 6.

Isolated nasal polypi. WACHTER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, No. 3.

Endothelioma of the ethmoid bone. WALTER JERCHEL. *Beitr. z. klin. Chir.*, 1913, lxxxv, 419.

Treatment of fractures of the nose. SARGNON. *Arch. internat. de laryngol., d'otol. et de rhinol., Par.*, 1913, xxxv, No. 3.

Cysts of the maxillary sinus. COLLET. *Rev. hebdomadaire de laryngol., d'otol. et de rhinol., Bordeaux*, 1913, xxxiv, No. 27.

The treatment of alveolar fistulae of the maxillary sinus. TOUBERT. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

Tuberculosis of the accessory sinuses of the nose. DÖRNER. Arch. f. Laryngol. u. Rhinol., 1913, xxvii, 446.

Some remote effects of chronic sinus suppuration. R. C. LYNCH. New Orl. M. & S. J., 1913, lxvi, 20.

The use of arsenical compounds for syphilitic disease of the nose and throat; a note on sixteen cases. HAROLD L. WHALE. Lancet, Lond., 1913, clxxxv, 216.

Nasal septum and its relationship to the syndrome of sphenopalatine ganglion neurosis. JOHN J. KYLE. Interst. M. J., 1913, xx, 651. [572]

On undertaking submucous septum work. DOUGLAS MACFARLAN. J. Ophth., Otol. & Laryngol., 1913, xix, 265.

Further experience with a method for prevention of perforation in submucous resection. RICHARD M. NELSON. J. Med. Ass. Ga., 1913, iii, 75.

Submucous resection. G. C. KNEEDLER. Pittsburgh M. J., 1913, i, 27.

Therapeutics of the nose. JOHN B. GARRISON. Hahne-man. Monthly, 1913, xlvii, 501.

A simplified method of radical operation in purulent inflammation of the frontal sinus. MALJUTIN. Arch. f. Laryngol. u. Rhinol., 1913, xxvii, No. 3.

Surgery of the nasal sinuses. WALTER KLESTADT. Ergebn. d. Chir. u. Orthop., 1913, vi, 138. [572]

The anatomical and clinical relations of the sphenoidal sinus to the cavernous sinus and the nerve stems of the oculomotor, trochlear, trigeminal, abducent and vidian nerves. GREENFIELD SLUDER. Arch. f. Laryngol. u. Rhinol., 1913, xxvii, No. 3.

Palato-laryngeal hemiplegia of traumatic origin. BERTEMES. Rev. hebdom. de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 30.

Traumatic hæmatoma of the larynx, its development and transformation into an angiofibrous tumor. PHILIP. Rev. hebdom. de laryngol., d'otol. et de rhinol., 1913, xxxiv, 65.

Hæmorrhages in endolaryngeal interventions. MERMOID. Arch. internat. de laryngol., d'otol. et de rhinol., Par., 1913, xxxv, No. 3.

Metastatic abscesses of the laryngeal musculature in pyæmia. IMHOFFER. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, iv, No. 2.

Alcohol injections into the superior laryngeal nerve in tuberculous laryngitis. WILLIAM MITHOEFFER. Ohio St. M. J., 1913, ix, 315. [572]

Antral empyæma, with the presentation of an efficient conservative operation for its cure. H. C. MASLAND. N. Y. M. J., 1913, xcvi, 190. [573]

The recent progress of endoscopic methods as applied to the larynx, trachea, bronchi, cesophagus, and stomach. C. JACKSON. Laryngoscope, 1913, xxiii, 721.

Some cases of total extirpation of the larynx. SANTIUSTE. Arch. internat. de laryngol., d'otol., et de rhinol., Par., 1913, xxxv, No. 3.

Four cases of glottic spasm in adults, with unusual find-

ings in the lower half of the larynx and the trachea. FELDMAN. Ztschr. d. Ohrenh. u. f. d. Krankh. d. Luftwege, Wiesb., 1913, xlviii, No. 4.

Primary carcinoma of the epiglottis. MAYER. Arch. f. Laryngol. u. Rhinol., 1913, xxvii, No. 2.

A piece of glass which lodged in the pharynx after transfixing the carotid region; removal by the natural path of access; presentation of the foreign body and of the patient. MOUNIER. Arch. internat. de laryngol., d'otol., et de rhinol., Par., 1913, xxxv, No. 2.

Acute pharyngeal tonsillitis. HOMER DUPUY. New Orl. M. & S. J., 1913, lxvi, 18.

One hundred cases of peritonitis. CHARLIER. Hygiea, Stockholm, 1913, lxxv, No. 6.

The question of the tonsils. JACQUES. Rev. hebdom. de laryngol., d'otol. et de rhinol., Bordeaux, 1913, xxxiv, No. 23.

Pathology of the palatin tonsils. IMHOFFER. Prag. med. Wchnschr., 1913, xxxviii, 411.

Some observations from tonsil and adenoid operations. W. C. KELLOGG. J. Med. Ass. Ga., 1913, iii, 75.

Conservative treatment of the tonsils. KASSEL. Med. Klin., Berl., 1913, ix, No. 29.

The results of tonsillectomy under local anæsthesia. BRYAN DE FOREST SHEEDY. Chicago Med. Recorder, 1913, xxxv, 271.

The difficulties of tonsillectomy and how to deal with them. JOHN O'MALLEY. Lancet, Lond., 1913, clxxxv, 19.

Trephining the maxillary bone in dental myelocyst; a contribution on death due to sepsis following extraction of teeth. B. MAYRHOFER. Wien. klin. Wchnschr., 1913, xxvi, 1212.

Pathology of the affections of the mucous membrane of the mouth and the pharynx. LEVINSTEIN. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, iv, No. 2.

Extension oral surgery (tongue and tonsils) without section of the maxilla or tracheotomy. KUHN. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, iv, No. 2.

Amputation of the tongue by the buccal path of access. BAUDET. Toulouse méd., 1913, xv, No. 13.

Use of palate mucous membrane flaps in ankylosis of the jaw due to cicatricial formations in the cheek. JOHN B. MURPHY. J. Am. M. Ass., 1913, lxi, 245. [573]

Cleft palate and hare-lip. STEWART L. MCCURDY. Pittsburgh M. J., 1913, i, 34.

Infiltration of the lingual nerve for operations upon the tongue and for relief of pain in inoperable carcinoma. P. G. SKILLERN. Surg., Gynec. & Obst., 1913, xvii, 114. [573]

The plate in dental radiography. EDWARD SHENTON. Guy's Hosp. Gaz., 1913, xxvii, 272.

A peculiar case of suppuration of the maxillary sinus of dental origin; complications. WOLDEMAR RICHTER. Deutsche Monatschr. f. Zahnh., 1913, xxxi, 381.

The present status of local anæsthesia in dentistry. GOFFUND. Odontol. Obozrenié, St. Petersburg, 1913, No. 3, 202.

INTERNATIONAL ABSTRACT OF SURGERY

DECEMBER, 1913

ABSTRACTS OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

SEPTIC AND ANTISEPTIC SURGERY

Kozlowki, B.: Alcohol Operating Gloves (Alkohol-operationshandschuhe). *Zentralbl. f. Chir.*, 1913, xl, 1038. By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

In view of the fact that alcohol hardens the skin and fixates cutaneous germs, the author uses in his operations sterile thread gloves soaked in alcohol and put on moist over the disinfected hand. He has never noted any injury to the skin of the hands even after many hours of contact with the alcohol, nor any injury to the tissue in the operative field. The gloves are frequently moistened again with alcohol during the operation or replaced by fresh ones soaked in alcohol.

GENEWEIN.

ANÆSTHETICS

Buxton, W.: A Dosimetric Method of Administering Chloroform. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By *Surg., Gynec. & Obst.*

The principles involved in this method are as follows:

1. Chloroform acts upon the tissues in proportion to the strength of its vapor in mixtures with air or liquids.
2. The action of chloroform is progressive, the narcosis becoming deeper when the chloroform is given over a long period in constant dilution.
3. Different body tissues are affected in a similar way though in different degrees. Percentages of vapor below 1 per cent do not produce anæsthesia but interfere with the temperature and metabolism. Higher percentages induce anæsthesia, lower blood pressure, and interfere with respiration.
4. Chloroform is an ultimate protoplasm poison.
5. Chloroform reacts decidedly more vigorously upon pathological tissues and in abnormal conditions such as asphyxia, anæmia, fatty or degenerative changes in tissue cells, etc.

6. A definite percentage of vapor will produce anæsthesia but greater amounts produce deeper narcosis which interferes with vital functions. The amount of chloroform necessary to maintain a steady level of anæsthesia varies inversely with the length of time it is inhaled.

7. The amount of vapor required to induce and maintain anæsthesia is less for individuals of impaired vitality and for children.

The extent to which chloroform passes from the air into the blood stream is impossible to gauge. The anæsthetic in the tissue cells causes a lessening, and ultimately, a cessation of bio-chemical function, this interference being directly proportional to the percentage strength of the chloroform introduced. Waller has shown that nerve tissue first becomes paralyzed, then loses its conductivity, a uniform result following a known percentage strength of vapors. The degree of hæmolysis is difficult to estimate because the influence exerted by many factors in human beings is unknown. Chloroform causes a fall of blood pressure, heart weakness, possibly due partly to dilatation, and a lessening of vasomotor control. These effects can be controlled by lessening the amount of chloroform given *pari passu* with the length of time that it is administered, providing environing conditions remain the same. The effects are influenced profoundly by asphyxia, hæmorrhage, or traumatic shock. Oxygen restrains the effect of chloroform upon the tissues, and normal blood protects them. A percentage of chloroform that will produce a safe anæsthesia in a normal individual may be dangerous for one whose blood is vitiated by disease and especially by anoxæmia.

It is agreed that double the anæsthetic dose constitutes the lethal dose. Chloroform affects tissues in the following order: (1) nerve tissue, the highly differentiated first; (2) heart muscle; (3) striped

voluntary muscle; and (4) involuntary muscle fibre.

Upon this fact anæsthesia depends; otherwise the production of unconsciousness would be impossible. The most highly differentiated portion of the brain is first thrown out of function, then the lower ganglia are affected while blood pressure falls and respiratory functions become more limited. The myocardium is affected rapidly and early and soon loses its power of contracting. The normal reflex mechanism is so affected that abnormally severe inhibitions are elicited and metabolism may be profoundly influenced. From the foregoing the author believes that the effects of chloroform are due to the actual vapor strength rather than to the actual amount of drug used, not considering, of course, the result from toxic quantities. Therefore, the dosimetric system is advocated as a means of limiting the strength of the admixture used, not only in inducing anæsthesia but in maintaining it as the tissues become more and more under the influence of the drug, in order to be sure that its effect is merely anæsthetic in character and not toxæmic.

In the induction of anæsthesia, it has been found that the organism will tolerate a high percentage vapor if the strength is reached gradually, while its sudden use results in collapse and even death. For a normal person it has been found that a strength of about 2 per cent will induce anæsthesia; that less will cause sleep only; and that more will embarrass the respiration and circulation. In spite of these facts, the average administrator experiments upon his patients, and his results depend upon his personal acumen as an experimenter. Failure is often certain because of his inability to estimate subtle tissue changes and to anticipate contingencies of shock and actual tissue injury. These considerations bear equally upon the period of maintenance when an overdose of chloroform may put the patient into a state of toxæmia even though his life has never been in jeopardy during the administration.

There are three dosimetric methods: (1) an open method; (2) the administration of mixtures; (3) the administration by instruments which present atmospheres of known strength or by inhalers which determine an admixture of chloroform and air the strength of which is known and can be varied by the operator with great accuracy. The open method is comparatively accurate, but only in the hands of those with the utmost skill and experience and when disturbing factors such as variations in depth and frequency of respiration, room temperature, and air currents can be eliminated. With mixtures, the same objections hold true, and, in addition, it is impossible to obtain any accurate percentage value for the chloroform which is given off because of the difference in the boiling points of the ingredients.

Many mechanical inhalers are on the market—Bert's, Snow's, Clover's and the Roth Drager apparatus—but all of these allow the 2 per cent

strength to be exceeded. The regulators of Dubois, Waller, and Alcock are exact but bulky. The author has used chiefly the Vernon-Harcourt regulator and his experience has been that 2 per cent need not be exceeded. In very muscular and obese subjects rapid induction with nitrous oxide and ether preceded by gr. 1/100 of atropin has been serviceable. The author uses oxygen in order to maintain the vigor of the tissues and to lessen shock and prevent "weeping" when large areas are incised or denuded. When a deep narcosis is necessary a dosimetric inhaler enables the anæsthetist to better control the higher percentages when he is working in the danger zone. Cyanosis is due not to the inhaler but to preventable complications which may arise with any method of giving chloroform. Nasal and mouth tubes are supplied with the common inhalers and the vapor may be inspired by Crile's method or can be propelled by a foot bellows.

After dosimetric administration the patient has a normal color and there are few after-effects. After the old method, on the other hand, the patient is pale and drawn; he vomits and is in a greater or less degree of collapse.

The controlling principle of this method, which the author considers the only safe means of administering the drug, is to gradually increase the percentage of chloroform vapor, and, as soon as anæsthesia is established, to lower it to the point where the intake equalizes the output from the lungs. No matter what changes may occur in the patient's breathing, a safe strength—2 per cent—should not be exceeded, and even struggling does not call for a restriction of the supply.

E. K. ARMSTRONG.

Descarpentries, M.: General Anæsthesia by Intramuscular Injections of Ether; a New Anæsthesia Apparatus, Particularly for Etherization, Based Upon the Principles Derived from the Latter (*Anesthésie générale par les injections intramusculaires d'éther; Un nouvel appareil à anesthésie, en particulier à étherisation, basé sur les principes qui en découlent*). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

General anæsthesia may be induced without danger by intramuscular injections of ether if it is given in successive small doses (about 5 cc.) and injected slowly into large muscle masses or thick aponeuroses to limit the vaporization and keep the vapor under tension.

The best place is the gluteal muscles. The entire dosage varies, according to the weight of the patient, about a cubic centimeter to a kilogram of weight. There is little danger of giving too much. The first pain is keen, but is very quickly over. After the anæsthesia, the patient complains of a feeling of heaviness in his legs. To avoid the initial pain, the anæsthesia should be begun with a few inhalations of ethyl chloride or chloroform. A few drops of chloroform may be given also without any danger while the patient is anæsthetized. This makes

the narcosis more profound and permits of the use of a smaller quantity of ether.

The method is simple; it greatly facilitates operations about the face and neck, and dispenses with the necessity of having an anæsthetist. It enables a surgeon to operate alone in emergency cases under general anæsthesia. It differs from ordinary etherization in that by it the ether vapor enters the blood without any admixture of carbon dioxide and is warm (42° – 33°) when it enters the alveoli of the lungs.

The anæsthesia apparatus described is constructed to carry out these two principles. It gives a rapid, calm, and regular narcosis without pulmonary complications and contra-indications. It combats anæsthetic shock in that it does not lower the patient's temperature. During the first ten minutes it raises the rectal temperature from two to five tenths of a degree.

The apparatus permits of obtaining the anæsthetic mixture that is most favorable to cure. Some patients abhor the odor of ether; in such cases anæsthesia can be begun with 10 cc. of ethyl chloride. The apparatus does away with the exhalation of ether vapor in the operating and the risk of explosion. The author believes that a surgeon who works daily in ether vapor becomes gradually fatigued and intoxicated with ether.

Gwathmey, J. T.: Oil-Ether: an Attempt to Abolish Inhalation Anæsthetics. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Experiments on animals, under the direct supervision of Prof. George Wallace, of the Pharmacological Department of Bellevue Medical College, were conducted for the purpose of studying the anæsthetic value of ether when introduced in solution into the rectum. A 5 per cent solution of ether in normal saline solution was used first, about 500 cc. being injected into the colon. In order to reduce the bulk, Gwathmey suggested employing oil instead of saline solution. Experiments under the supervision of Prof. Charles Baskerville, Director of the Department of Chemistry of the College of the City of New York, were then made to determine the relative rapidity with which the ether escaped from the oil in which it was dissolved, the solutions compared being of the same strength and subject to the same temperature. Cod-liver oil, olive oil, neats-foot oil, carron oil, paraffin (Russian mineral oil), milk, and cream were used. It was found that carron oil parted with the ether in nearly one fourth of the time that was required by the other substances.

Ten successful experiments were carried out upon dogs, with complete anæsthesia and no alarming symptoms. The ether was given in solution in cotton-seed oil from 55 to 75 per cent, the amount of ether injected being from 50 to 75 cc. The shortest time required for the establishment of surgical anæsthesia was five minutes; the longest time, fifty

minutes. The duration of the anæsthesia after the ether injection was stopped averaged about one hour. In no case was there evidence of more than a mild irritation of the rectum following the ether injection, and such irritation passed off within twenty-four hours.

In the clinical experiments the oil-ether solutions, varying from 40 to 75 per cent, were employed. It was found that solutions of 75 per cent proved most satisfactory in both animal and human subjects. The most gratifying results were obtained from the use of 200 to 300 cc. of a mixture of 6 oz. of ether and 2 oz. of oil. Anæsthesia thus induced was ideal. Pulse and respiration were normal; there were no mucous râles, and no after-effects such as nausea or diarrhœa.

One of the underlying thoughts in developing oil-ether anæsthesia was to prevent certain dangers that attend intravenous anæsthesia. The fact that the only apparatus needed is a small catheter and a funnel into which to pour the mixture, is a strong argument in favor of this method. To a practitioner compelled to work alone it should be of inestimable benefit. On account of the gradual and rapid evaporation from the lungs it would appear to be at least a comparatively safe method of inducing anæsthesia. Mucus and saliva are absent, and the patient's lungs and stomach are spared.

The preparation of the patient is the same as for ether-vapor anæsthesia per rectum. A cathartic of castor oil is given the night preceding the operation and is followed in the morning by soap-suds enemata, one hour apart, or until the return comes back clear. The patient is then allowed to rest for thirty to sixty minutes, when a suppository containing the following substances is inserted: For adults: $\frac{3}{4}$ gr. powdered opium and 15 gr. chlorotone; for children: $\frac{1}{4}$ gr. powdered opium and 5 gr. chlorotone. One hour after the insertion of this suppository, the oil-ether is introduced. It is injected slowly in order to avoid irritation or other untoward effects.

The author gives the histories of two perfect cases illustrative of the application of the method to the human subject. In each the anæsthesia lasted forty-five minutes.

Both clinical and laboratory experimentation with the method is being continued, and reports will be published later.

Caillaud, E.: Prolonged General Anæsthesia with Ethyl Chloride (*L'anesthésie générale prolongée au chlorure d'éthyle*). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Ethyl chloride is very much superior to chloroform or ether for producing general anæsthesia because it is less toxic.

However, ethyl chloride anæsthesia can be produced only by following certain rules that are given by the author, and by using an apparatus that permits mixing at will a definite dosage of ethyl chloride with another anæsthetic and an abundant

supply of air or oxygen. For a minute or two at the beginning of the anæsthesia a few drops of chloroform should be given with the ethyl chloride. After that the ethyl chloride should be continued alone. The author reports five hundred and sixty-eight cases of anæsthesia given with this apparatus, four hundred and fifty-three of which were prolonged anæsthesias for various major operations (stomach, liver, brain, gynecological, etc.). Not a single accident occurred. Anæsthesia takes place rapidly — in one or two minutes. The results are excellent because the organism is submitted to a minimum of intoxication.

Schlimpert: Sacral Anæsthesia (Sakralanæsthesie).

Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The results from low anæsthesias in 114 cases were perfect in 54.4 per cent. In 21 per cent inhalation narcosis was resorted to on account of the long duration of the operations. In 13.2 per cent a certain amount of ether or chloroform had to be used from the beginning. In 11.4 per cent the anæsthesia was absolutely negative.

In 342 cases of high anæsthesias the results were perfect in 46.5 per cent. Ether or chloroform had to be given on account of prolonged operation in 21.3 per cent. In 25.6 per cent the anæsthesia was incomplete, and in 5.6 per cent, negative. The only disturbing complication was a blanching of the face which lasted two or three hours and was associated with a decrease in the blood pressure. The chief advantage was the absence of late complications, especially headaches.

The indications for the different forms of anæsthesia are as follows: The low form of sacral anæsthesia should be used for low operations; chloroform and ether for high operations of short duration, complicated appendicectomies; lumbar anæsthesia for high operations in women with weak hearts and for very fat women; and high sacral anæsthesia for all other cases.

Tuffier, T.: New Methods in Spinal Analgesia.

Tr. Internat. Cong. Med., Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Extradural anæsthesia, which was given up for a time, has been resumed. Injection is made into the sacro-coccygeal orifice, the needle being introduced parallel with the axis of the canal, which generally makes an angle of 45° with the surface of the body. Stovaine and later novocaine have been used. Schlimpert gives, along with the latter, veronal scopolamine-narcophine, scopolamine-pantopon, or scopolamine-morphine to produce amnesia. The anæsthesia lasts three quarters of an hour with the low injection, and from a half to three quarters of an hour with the high injection. The accidents occurring as a result of its use are not grave. The technique is long and complicated and the results uncertain.

Intradural injections are either inferior sub-

medullary or superior (Jonnesco), between the first and second dorsal, and, though seemingly dangerous, have given satisfactory statistics. At first cocaine was used, then stovaine, then tropacocaine, and finally novocaine. The latter is now used by most operators who practice spinal anæsthesia. All of these anæsthetics are today used in combination with various substances.

Jonnesco uses strychnine with stovaine to avoid the accidents attributed to the latter. The mortality varies in different sets of statistics. The causes of death are often unknown. Spinal anæsthesia is contra-indicated in very emotional subjects, in infants, syphilitics, those suffering from medullary affections, and in operations which extend beyond the umbilicus.

Le Filliatre: General Analgesia by Cocaine Anæsthesia of the Lumbo-Sacral Routes (Analgesia général par rachicocainisation). *Tr. Internat. Cong. Med., Lond., 1913, Aug.*

By Surg., Gynec. & Obst.

Le Filliatre of Paris two years ago succeeded in obtaining a constant analgesia not only of the trunk and the upper limbs but also of the head and neck by giving the injection always at the level of the first sacral vertebra after having first evacuated a sufficient amount of the cephalorhachidian fluid. He injects 2 ccm. of a solution of cocaine sterilized at 150° C., freshly prepared, and under the skin of the patient he injects 2 milligrams of strychnine and 5 centigrams of sparteine. At the end of from ten to fifteen minutes a total anæsthesia of the head and the neck is obtained.

The duration of the anæsthesia varies from a half-hour to an hour for the head and the neck and from a half-hour to three hours for the subumbilical region.

Since 1909 the author has produced two hundred and forty-eight analgesias of the subumbilical region, twenty-eight of which were for surgery of the neck and head.

In thirteen years he has produced two thousand, eight hundred and thirty-seven subumbilical or superumbilical analgesias many of which were on the same subject, and he has never noted the least accident either immediate or late.

Lumbar puncture made at the end of twenty-four hours shows that the cephalorhachidian liquid is normal.

Brunner, F.: Paralysis of the Phrenic Nerve after Plexus Anæsthesia (Zur Frage der Phrenicuslähmung nach Plexusanæsthesie). *Zentralbl. f. Chir., 1913, xl, 1104.* By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports two cases with a picture similar to that recently observed in plexus anæsthesia, but without a preceding plexus anæsthesia. In both cases a goiter operation was performed.

The first case was that of a 21-year-old man whose appendix and left lobe of the thyroid were resected simultaneously under chloroform narcosis. Several

hours after the operation the patient complained of severe dyspnoea "as if there were a spasm of the diaphragm." The pulse was 128. There was polypnoea and pain in the abdominal wound. When the dressings were changed no hæmorrhage was found in the wound of the neck. In the morning normal breathing was resumed again.

The second case was a bilateral resection performed for Basedow's disease, with bilateral anæsthesia according to Braun. Four hours after the operation the patient complained of difficulty in breathing and pain in the left chest. Two nights later there was orthopnoea, jerky, cog-wheel expiration, and pain below the left shoulder blade. On the fourth day the X-ray showed a high-standing diaphragm on the right side (2 cm. higher) and free motion on both sides. On the sixth day the respiratory difficulty and pain had disappeared.

The author is of the opinion that an injury irritation of the pleura was present, caused possibly by a hæmorrhage extending along the pleura. This explains the free interval. He has never before observed this in 900 goiter operations. Paralysis of the phrenic nerve, or irritation, seems to him improbable for many reasons. Sauerbruch does not report any such phenomena in repeated phrenicotomies; according to Kulenkampff the phrenic nerve does not carry any fibers sensitive to pain; Oehlecker believes that the pain must have some other source; according to Hirschler, long-continuing paralysis and pains are due to nerve injuries, and not to the effect of the novocaine suprarenin solutions.

KULENKAMPFF.

Gembicki: "Narcosia," a New Hamamelis Local Anæsthetic ("Narcosia," ein neues Hamamel-Lokal-Anæstheticum). *Deutsche zahnärztl. Wchnschr.*, 1913, xvi, 521.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has attempted to reduce the toxicity of cocaine by adding hamamelis extract. In this way he has succeeded in diminishing the cocaine content to 0.75 per cent and obtaining the same effect as that given by a 1 per cent cocaine solution.

The mixture he calls "narcosia." In contrast to suprarenal preparations, the hamamelis extract has an anæsthetizing power, is not a toxic body, and does not produce muscular contraction. It has a tonic action on the heart and accelerates the healing of wounds. The author has used this mixture in about 1,000 cases with good results.

HERDA.

SURGICAL INSTRUMENTS AND APPARATUS

Connell, K: An Apparatus—Anæsthetometer—for Measuring and Mixing Anæsthetics and Other Vapors and Gases. *Surg., Gynec. & Obst.*, 1913, xvii, 245
By Surg., Gynec. & Obst.

The author describes an apparatus developed from a commercial gas meter which measures and records the passage of air and other gases, mixes two or more gases automatically in the desired proportion, and also feeds air and volatile liquid automatically into a common mixing chamber.

Delivery of these accurate mixtures to the patient may be effected by a closed face mask. After surgical anæsthesia has been once established, however, the author prefers to deliver by insufflation. He describes his method of pharyngeal insufflation, which consists of insufflation into the lower pharynx per moment of the entire bulk needed for inspiration of an accurately prepared anæsthetic mixture. For routine delivery this method is preferred to intratracheal insufflation.

The percentages of ether vapor in air required by man have been established by this apparatus as follows: The most advantageous delivery curve rises during primary anæsthesia to 35 or 45 per cent by weight of ether vapor to air at sea level. With the beginning of relaxation the curve falls to 26 per cent, and within a few minutes to 21 per cent at which level it remains for five or ten minutes. The percentage is then gradually lowered to 15 per cent by the end of 40 minutes. This percentage has been found to establish the proper anæsthetic tension for the indefinite continuance of full surgical anæsthesia. Lower percentages are used only where light anæsthesia is desired. The one variable factor is the length of time and the difficulty in saturating a particular individual to this uniform anæsthetic tension of 48 millimeters, an equivalent of 15 per cent ether vapor pressure in the alveolar air. The time varies from 5 minutes, in an infant, up to 40 minutes, in a robust alcoholic.

The author discusses the utility of heating anæsthetic mixtures, and concludes that artificial heat is of importance only to effect accurate vaporization, since the actual loss of body heat through warming respired gases is negligible.

Accuracy of dosage and automatic delivery have increased the safety and efficiency of ether administration, and decreased the shock of operative procedure and the sequelæ of ether anæsthesia.

SURGERY OF THE HEAD AND NECK

HEAD

Kahn, L. M.: Congenital Bilateral Fistula of the Lower Lip. *Am. J. M. Sc.*, 1913, cxlvi, 223.

By Surg., Gynec. & Obst.

The author reports twenty-two cases from the literature and one of his own. The latter is a patient

three years of age who shows no other facial or congenital deformity and is perfectly healthy. The family history is negative. The fistulæ open on either side of the median line of the lip. The slightly oval opening admits a small probe which may be passed downward and inward toward the median line and inserted into fluid pockets just

beneath the mucous membrane on the inner surface of the lip. The fistulae are about 1.5 cm. in length. They do not communicate with each other but are separated by a thin fibrous partition. The openings are filled with a glairy transparent secretion.

In reviewing the cases reported, Kahn finds that the condition is usually accompanied by other congenital deformities such as cleft palate and hare-lip; also that it frequently occurs in two or more members of the same family. Huber offers the following explanation: "On either side the well-known median notch seen to persist sometime during intra-uterine life after fusion of the two halves of the lower lip has been completed, it is not unusual to detect a slight secondary notching on either side. This becomes deeper, its deepest portion becoming gradually buried until a short tubular tract lined with mucosa is formed." The treatment indicated is excision.

H. A. PORTS.

Coleman, F.: The Treatment of Fractures of the Mandible. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Before considering the treatment of fractures of the mandible, a few remarks on their etiology, position, and character will serve as an aid in determining the method of treatment to employ.

Fractures of the mandible are almost invariably the result of direct violence. The seat of the fracture, however, is not infrequently on the side opposite to that which sustained the injury.

Fracture of the mandible occurs rarely when the teeth are in occlusion, as under these circumstances the maxilla and mandible become for all practical purposes one bone, so that the brunt of the blow is transmitted through the condyle of the jaw to the glenoid fossa, producing concussion of the brain and in some cases a fracture of the base of the skull.

The signs and symptoms of fracture of the jaw do not fall within the scope of this paper, but the author wishes to mention a sign that has so far escaped attention or has not been appreciated.

The sign in question is produced by an effusion of blood into the tissues of the floor of the mouth, and gives rise to a very characteristic appearance of its mucous membrane, which becomes raised, forming a bluish, tense swelling under the front part of the tongue. The sublingual fold lying between the tongue and the mandible is chiefly involved in this effusion, as the mucous membrane elsewhere is too firmly bound down to bulge in this manner.

This sign alone will serve to differentiate an external bruise from an injury that has produced in addition a disunion of the jaw, for it is difficult to understand, from an anatomical point of view, how an effusion of blood can take place into this space bounded externally by the deep cervical fascia and the body of the mandible unless a lesion of one of these structures has occurred. We can disregard the deep cervical fascia, which is not a structure readily torn, and, therefore, surmise that the breach has involved the body of the mandible.

The author has found this sign to be present almost invariably and to form as conclusive evidence of a fracture of the mandible as an effusion of blood into the orbital cellular tissue is evidence of a fractured base.

In young children it is sometimes impossible to make a diagnosis immediately after the injury, except by the use of skiagraphy or by the aid of an anæsthetic, nor is it strictly necessary. The parts are so much inflamed and swollen with effused blood that even if a fracture were detected, it would be harmful as well as painful to apply pressure in any form over the swollen tissues. After a few days most of the blood and exuded lymph will have become absorbed, the inflammation will have subsided, so that the mouth can be opened to a greater extent and a more thorough examination can be made with a view to diagnosis and subsequent treatment. Even if wiring of the bony fragments be contemplated, this operation will be rendered far easier and less risk of sepsis will be incurred if it be delayed until absorption of some of the inflammatory exudation has taken place.

Fractures in children can usually be treated satisfactorily with metal, gutta-percha, or poroplastic splints moulded to the outside of the jaw. In adults if there be but little tendency to displacement of the fragments, the same methods will suffice.

Out of some 50 cases of fracture of the jaw that have passed through the author's hands for treatment, he has only once been obliged to apply an internal splint for a child.

An external splint will allow slight movement at the condyle of the jaw, but if the splint be carefully moulded, very little movement will take place in its continuity.

The chief value of external splints is to keep the jaw at rest when there is not much tendency to displacement, and to act as a danger signal in protecting the patient from further injury. The four-tailed bandage serves practically only the latter function.

Wiring the teeth together, although a method that dates back to the time of Hippocrates, should rarely be used for retaining complete fractures of the mandible in position, and never if other methods be available. The teeth on either side of a fracture, if not already loose and tender, will rapidly become so when this unnatural strain is put upon them.

The principle of all mechanical appliances in the treatment of fractures of the jaw is to retain the fragments in position with a minimum of discomfort to the patient and with the least interference to the function of the part.

The internal splints employed for fracture of the mandible conform largely to three types; viz.,

1. Those which utilize the teeth as their abutments in controlling the fragments; e.g., Hammond splint, Tomes splint.

2. Those which utilize the teeth and body of the jaw as their abutments in controlling the fragments; e.g., Kingsley splint, Ackland splint.

3. Those which utilize the teeth of the opposite jaw (i.e., maxilla) as their abutments in controlling the fragments; e.g., Gunning splint, Hern splint.

Some of the splints used combine two or more of these principles or are reinforced by other means.

Before any form of splint is adapted to the jaw, some attempt should be made to get the mouth into a clean condition.

Even if the mouth be clean and healthy at the time of the fracture, it rarely remains so subsequently, owing to the impairment of mastication and deglutition that result. Apart from this, there is a natural disinclination on the part of the patient to carry out the ordinary routine of cleanliness on account of the discomfort it entails, nor can this be performed satisfactorily by the nurse or surgeon in charge.

Moulds of the jaws are obtained from wax, gutta-percha, or plaster pressed over the teeth, the material used being retained in a cup or tray. A counterpart in plaster of Paris is made from the mould. There is no need to reduce the fragments while taking the impression, but the jaw should be carefully steadied. The plaster model is sawn through in the line of fracture, should there be any displacement, and the splint fitted to the corrected model. Models of both jaws must be obtained when the splint is to take its bearings on both these parts, or if the articulation of the broken jaw requires some rectification.

If a metal plate or frame is to be fitted to the teeth, dies must be obtained.

Splints made to fit the teeth, gums, or both of these parts, should be made slightly loose when there is difficulty in reducing the fragments, for, although the deformity may be readily corrected on a model, it may be far less easily rectified in the mouth, so that allowance must be made for the difficulties that may be encountered in restoring the parts to their correct alignment.

When the splint is ready for insertion, the fragments are reduced; an anæsthetic is sometimes useful at this stage.

Splints are usually retained in the mouth for six to eight weeks. Even if the fragments have not come into accurate apposition, and a slight gap exists between opposing teeth in the region of the fracture, this will be almost entirely effaced within six months to a year, owing to the elongating of the teeth until resistance from occlusion is offered.

Some two or three years ago the author devised a jaw-clamp that he hoped might be of great service in fixing the fragments of a broken jaw, and obviate the necessity of making a special splint for each patient.

The principle of the clamp consisted of a strong steel spring, which could be opened to enclose the alveolus, and when released embedded itself in the bone by means of its projecting claws.

The splint was applied as follows:

The patient was placed under an anæsthetic, the fragments of the jaw were reduced, the clamp was

opened (with a special instrument) and forced over the jaw in the region of the fracture and then released; thus the clamp was left embedded on each side of the fracture.

The sharp projections or claws at the extremities of the limbs of the clamp readily penetrated the mucous membrane, but did not sufficiently penetrate the bone to fix the fragments securely. The ease with which the clamp could be inserted and removed, its cleanliness, and the ready access to the site of the fracture that it allowed, were advantages which appealed strongly in its favor. Moreover, the clamp was adaptable whether teeth were present or not, and could be used over and over again.

The author has employed the clamp only in one case, and although the result was excellent, he is unable to say how much this result was due to the use of the clamp, as in most cases of fracture of the jaw the result is satisfactory provided there is no great tendency to displacement of the fragments.

The clamp was left on for six weeks or more, during which time the patient experienced but little discomfort.

The principle of the clamp seems worthy of attention, and if only some means can be devised by which the hard tissues can be penetrated as well as the soft, the clamp would form a useful means of retaining fragments of the jaw in apposition.

Wiring the fragments together is not a method of treatment often required for fractures of the mandible.

If a Hammond or a metal-cap splint has been utilized, semi-solid food may be given within a day or two, and after two or three weeks this may be gradually replaced by, or incorporated with, finely divided solid food.

Those splints that fix the jaws to each other, necessitate the maintenance of a fluid diet until the splint is removed. The spout of the feeding cup should be fitted with an India rubber tube which can be passed into the space afforded by the splint.

The opening of an abscess may be required during the treatment of a fractured jaw. This is usually only a temporary expedient, as the abscess is usually due to necrosed bone, and until this is removed or has become exfoliated, the cause of the abscess remains. Sequestra of the body of the mandible are very slow in separating, and a sinus may persist for a year or more.

In neglected cases the tissues around the jaw may be riddled with abscesses discharging through puckered sinuses.

Ankylosis of the temporo-mandibular joint is a frequent sequel of fracture of the condyle.

Failure of bony union is uncommon. Gurlt met with only two instances of failure of union in his 143 recorded cases, and both of these were subsequently cured by operation.

The chief causes of failure to unite are want of rest of the fragments and necrosis, especially if the latter be extensive so that the ends of the living bone are widely separated.

Von Láng, K.: Suppurations of the Frontal Sinuses (Über abscedierende Stirnhöhleenerungen).
Beitr. z. klin. Chir., 1913, lxxxiv, 226.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Suppurations in the frontal sinuses originate exclusively in the nose. The most frequent cause is coryza and influenza. Much more rarely the inflammation is due to neighboring syphilitic or tuberculosis processes or trauma. Both acute and chronic disease is a source of constant danger because the infection may spread through congenital clefts in the bone or by way of the veins and lymph vessels, but principally through necrosis of the bone. The intactness of the bony wall is chiefly responsible for the local character of the affection. The thin lower wall is most frequently destroyed. The consequences are abscesses in the orbit, which in the most favorable cases perforate the upper eyelid, but frequently produce extensive orbital phlegmons. Necrosis of the anterior wall of the frontal sinus is less dangerous, as the pus can be easily reached under the skin of the forehead. Most rarely does the disease affect the posterior wall, in which case it leads as a rule to intra-cranial complications. In one or two days, the bone may be destroyed by an acute virulent inflammation and fatal meningitis may develop. Extradural as well as brain abscesses have also been observed. Meningitis serosa is rare and more favorable for the prognosis.

Diagnosis of frontal sinus suppurations with abscess formations is usually easy, especially if the presence of pus can be determined in the middle nasal passage. While uncomplicated frontal sinus suppurations with abscess formations are successfully treated endonasally, the abscess-producing forms are naturally attacked from the outside. Besides the incision of the abscess the frontal sinus must be opened widely. Kuhnt, Killian, and Riedel have pointed out the most useful methods. Their choice depends upon which of the walls is diseased. If the cranial contents are affected, purely surgical principles of treatment are employed. Onodi gives suitable directions for puncturing the frontal lobes. Thrombosis of the longitudinal sinus also must not be overlooked.

PAETZOLD.

Nimier, H., and Nimier, A.: On the Treatment of Fractures of the Petrous Portion of the Temporal Bone (Sur le traitement des fractures du rocher). *Rev. de chir.*, 1913, xlviii, 22.

By Journal de Chirurgie.

Admitting that non-infection of the tympanic cavity is of great importance in a majority of fractures of the petrous portion of the temporal bone, the authors, on the basis of the statistics of Phelps and Valentin, do not advise surgical interference in these fractures. In most cases drying of the auditory canal and the application of an absorbant dressing to the external ear is sufficient. When there is suppuration in the middle ear, either before or after the fracture, Nimier and Nimier believe that it should be the rule not to operate. Neither otor-

rhagia or escape of cerebro-spinal fluid are, according to the authors, *per se*, indications for operation. On the other hand, if an infection is present as confirmed by spinal puncture, then a decompression with permanent drainage is indicated. The subtemporal trephining is preferred to other craniectomies.

Decompression is indicated in cases of extradural hæmatoma in these fractures, especially if the mastoid ecchymosis comes at the location of the fissure. The authors prefer to the submastoid route, the transmastoid with exposure of the lateral sinus. If the hæmatoma is intradural (supposing that the localization can be made clinically) the submastoid route is preferred.

In case there is a bone disease, the authors, without admitting the absolute necessity of operation, recommend enlarging the opening in the tympanum. If there are concomitant encephalic troubles, they advise an operation with respect to the site of the bone disease rather than a preventive operation.

If the infection leads to a serous meningitis or a meningism, operation on the ear generally suffices, as is the case in more severe infections, where, however, a more radical operation including the cerebellar fossa and the submastoid region is necessary.

J. OKINCZYC.

Manges, W. F.: Findings in Obscure Head Lesions. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.

By Surg., Gynec. & Obst.

The subject is treated under two heads: (1) The findings in the skull bones; (2) the findings in the brain and its processes. The findings in diseases of the accessory sinuses and mastoids, and diseases and irregularity of the teeth and facial bones are not included.

Various subjects discussed are the findings in the skull bones due to external and internal influences, the immediate results of injury; the nature and extent of fracture, etc.; remote results; overlooked fractures; the organization of blood clots; osteomyelitis; periostitis; and factors tending toward malignancy, gumma, etc. Abscess of the brain is most frequently due to infection from skull bones or their processes; hence roentgenographs will be of decided value in showing the source of infection and help to differentiate it from other conditions. Even the more superficial abscesses may be localized by this means. Atrophy of the inner table of the skull due to pressure seems to show on the roentgenographs the location of tumors, cysts, etc., when they are superficial. General thinning of the skull bones with depressions corresponding to the brain convolutions occurs when there is internal hydrocephalus from any cause. In external hydrocephalus the bones may be thin but the convolution depressions are absent. The skull sutures are apt to be separated in both. A certain number of brain tumors are dense enough to cast diagnostic shadows. Nearly all tumors at the base of the brain will produce internal hydrocephalus. Reference is made

to the article by Bailey and Jelliffe on pineal tumors, and to abstracts of all reported cases (*Arch. Int. Med.*, 1911, viii, 851). Internal hydrocephalus was noted in nearly every case. This is clearly shown on roentgenographs.

The numerous investigations made of pituitary conditions are referred to only briefly. In twenty such recent cases with obscure head symptoms the author has found shadows of calcareous bodies in the region of the pineal gland. One case was an acromegalic, two had exophthalmic goiter, and several were epileptics. Nearly all had severe headache at times, and practically all had some irregularity of the sella turcica or clinoids.

Rasumowsky, W. J.: The Question of Surgical Treatment of Cortical, Traumatic or Non-Traumatic, Epilepsy (Zur Frage der chirurgischen Behandlung der corticalen, traumatischen und nicht traumatischen, Epilepsie). *Arch. f. klin. Chir.*, 1913, ci, 1075. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

According to the latest theories in regard to the nature of epilepsy, a strict differentiation between organic and genuine epilepsy is not permissible. In the majority of all of the cases of genuine epilepsy examined systematically, local affections have been found. Other forms begin as Jackson's spasms and assume the genuine character gradually. Local affections lead in time to permanent changes of a diffuse character.

Of the local diseases, the cortical and subcortical affections are especially adapted to surgical treatment. In some cases, however, the excision of the epileptogenous cortical centers has resulted in cure when the local organic changes were remote. In traumatic epilepsy changes caused by the trauma are found in the brain or in the covering layers. In traumatic Jacksonian epilepsy also without visible changes the removal of the centers is indicated. If general epilepsy without localized symptoms occurs after trauma the formation of a valve is indicated.

The author has operated on fourteen cases of non-traumatic Jacksonian epilepsy. One of these patients died at the end of nine months from purulent ependymitis of the ventricles of the brain. In more than half of the cases of epilepsy the results were good and only three or four were negative. In nearly every case bipolar stimulation was used to find the epileptogenous centers. In some cases this caused a pronounced epileptic spasm; in some, only the beginning of a spasm; and in others, only simple physiological contractions. After the center was found, the cortex was amputated in layers from seven to ten millimeters in thickness with a sharp knife or spoon until the irritation caused no or only slight epileptic contractions. The center was extirpated also in cases where no epileptic cramps could be elicited. Sometimes paralysis occurred but in every case it soon disappeared. A disturbance of the stereognostic sense lasts longer, but anaesthesia disappears quickly. In three cases of Koshewnikow's epilepsy an operation was per-

formed with good results, the arm center being excised in each instance. WORTMANN.

Rehn, E.: Autoplastic Fat Transplantation for Defects in the Dura and the Brain (Die Verwendung der autoplastischen Fetttransplantationen bei Dura- und Hirndefekten). *Arch. f. klin. Chir.*, 1913, ci, 962.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

With the introduction of dura plasty, the treatment of traumatic epilepsy has reached a new and successful stage. The result obtained by the author with autoplastic fat transplantation has been very favorable. In order to judge the method, a careful selection of suitable cases of purely typical partial and general traumatic epilepsy is necessary. A case can be pronounced cured only on the basis of an observation made from three to five years after the operation.

The results of dura plasty with transplantation of periosteum, peritoneum, and fascia also are discussed. The observed change of the transplanted fascia and pieces of peritoneum into fatty tissue the author considers a very useful sign of adaptation and an essential factor for the cure of traumatic epilepsy. In experiments with autoplastic transplantation of fat in dogs, he obtained a reactionless cure without the least disturbance of the central nervous system. The greater portion of the fatty tissue preserved all of its constituents unchanged and became the permanent possession of the part of the body into which it was put. The histological changes were illustrated with drawings. The transplantation formed a basal plate of connective tissue which completely covered the defect in the dura. Becoming more and more tense, though retaining its fine character, it formed a full substitute for the dura. Adhesions to the soft cerebral membrane could not be avoided, but as they formed only delicate connective-tissue strands they could always be easily loosened. On the basis of a successful case, the author recommends the transplantation of fat also for the purpose of plugging a defect in the ventricle. DE AHNA.

Luckett W. H.: Air in the Ventricles of the Brain Following a Fracture of the Skull; Report of a Case. *Surg., Gynec. & Obst.*, 1913, xvii, 237.

By Surg., Gynec. & Obst.

The author reports a case of a machinist who was struck by a trolley car, sustaining a fracture of the frontal bone and skull. Twelve days later he was apparently normal as far as his mental state was concerned. A week after this, he had periods of mental confusion and melancholy; otherwise he was normal except for increased knee jerks. The leucocyte count was 15,900. The eye grounds showed a bilateral optic neuritis. The condition was diagnosed as due to intracranial pressure caused probably by an abscess.

A series of X-ray plates showed that the ventricles were enormously dilated with either air or gas. The

ventricle was punctured through a right-sided subtemporal opening. On exposure, the dura did not bulge and was not particularly tense. No fluid escaped when the dura and pia were incised. A slight meningitis was noted. A needle was passed into the anterior horn of the lateral ventricle, and the removal of the trocar was followed by spurts of air. Eight cubic centimeters of clear cerebrospinal fluid also escaped. Owing to the presence of the air in the ventricles, a small piece of twisted rubber tissue was inserted into the cisterna magna through a suboccipital opening. Considerable clear fluid mixed with air passed from here also. The patient did well until the fourth day after operation when his temperature suddenly rose to 107° and he died.

At autopsy, air was found in the ventricles. There was a lacerated wound of the base of the right frontal lobe beneath the anterior horn and over the fracture in the orbital plate which communicated with the frontal sinus. It was subsequently learned that the air was probably forced up into the ventricles through the fracture in the frontal sinus during an attack of sneezing.

EDWARD L. CORNELL.

Bruns: The Treatment of Tumors of the Brain and the Indications for Operation (Behandlung der Gehirntumoren und die Indikationen für deren Operation). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Operative treatment of tumors of the brain are of two kinds: radical operations with extirpation of the tumors, and palliative operations for the relief of the brain. The latter are usually primary, but if for any reason the radical operation is not successful, they may be secondary. The indications for the radical operation and the prognosis of this operation depend upon three things:

1. The nature of the tumor. The most favorable are the sharply circumscribed tumors and especially those that are extracerebral. Unfortunately, clinical differentiation between the common infiltrating gliomata and the sharply circumscribed sarcomata, etc., is still very difficult.

2. The possibility of making a positive general and local diagnosis. The general diagnosis may be difficult on account of abscess, hydrocephalus, and the so-called pseudo-tumors. Local diagnosis is often impossible in cases of tumors in the right temporal and frontal lobes, and is difficult in cases of tumors in the semioval centrum and the corpus callosum.

3. The accessibility of the tumors. Tumors of the brain in the third ventricle are inaccessible to operative treatment as are also many of those in the medulla of the hemispheres. All others are accessible to surgical treatment with varying degrees of danger attending the operation. Primary palliative operations are indicated in cases in which, though there is no local diagnosis, the general diagnosis is positive and the general symptoms are very severe. They are indicated especially if the vision becomes so impaired that blindness is threatened.

Leri, A.: Acromegaly (Akromegalie). *Handb. d. Neurol.*, 1913, iv, 283.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The symptoms and course of the disease are described in detail. The diagnosis, which in outspoken cases rests on the characteristic physical findings, is fully discussed. In cases which are not so evident the X-ray may be used to confirm the diagnosis. The sella turcica is markedly enlarged, the skull is not of uniform thickness, and the various sinuses are distinctly widened. The eminences posterior to the lambdoid suture are much more prominent than normal. X-ray pictures are especially useful in the beginning of the disease to prevent confusing it with those conditions which do not, as a rule, involve the bones of the skull as well as those of the trunk and the extremities, but are confined either to one or the other; i.e., Paget's disease, rachitis, myxœdema, leontiasis ossea of Virchow, oxycephaly, and the hypertrophic pneumatic osteoarthropathy of Marie. The clinical picture of these various diseases is outlined sufficiently to bring out the differential diagnosis quite clearly. The objectively demonstrated changes in the hypophysis as an etiological factor conclude the first part. In the chapter on the pathogenesis and pathological physiology the author discusses various hypotheses. He is of the opinion that the cause of acromegaly is to be found in a lesion of the pituitary gland, and that back of it lies a dystrophic condition of the gland. The fact that tumors of the hypophysis occur without producing acromegaly does not affect this theory, since it has been shown experimentally that microscopically small portions of glandular tissue are sufficient for physiological function.

Whether the symptoms are produced by a hyper- or a hypo-secretion is hard to determine as the arguments for and against are not at all conclusive. Of therapeutic measures which are applicable, hypophyseal organotherapy is suggested if it can be proved that a hyposecretion is the cause of the disturbance. The results with this method have been unsatisfactory. Radiotherapy is capable of destroying hypophyseal tumors and seems to give the best results if applied in the form of the "crossed rays." Bécclère applies the rays to the hypophysis through the mouth and over the forehead and parietal regions. The earliest possible treatment is credited with the best results. If both of these lines of treatment prove unsuccessful, surgical procedures are indicated. Hirsch operates through the nasal cavity. After resecting the septum and the upper muscles he enters the sphenoid fossa. Of twenty-six patients operated upon by this method, three died and fifteen showed decided improvement. Von Schloffer and von Eiselsberg used the nasal route, the former by separating the nose from above downward, and the latter by making the flap from within outwards. By this method the ethmoidal cells are removed, the sphenoidal fossa opened; and its posterior wall removed. The results were gratifying. The severe headache subsided, the

visual disturbances were benefited, and the osseous deformities were checked. Three cases that prior to operation had acute coryza died of meningitis. Acute nasal inflammations, therefore, are a contra-indication to operation.

COSTE.

Stendell, W.: *The Comparative Anatomy and Histology of the Hypophysis Cerebri* (Zur vergleichenden Anatomie und Histologie der Hypophysis cerebri) *Arch. f. microscop. Anat.*, 1913, lxxxiii, 289.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has examined twelve species of Selachii, and the camel and the elephant and has studied the functional relations of the parts of the hypophysis in the production of its secretion. In spite of their common origin from the epithelium of the primitive buccal cavity, the anterior lobe and the pars intermedia must be regarded as two different ductless glands. The pars intermedia, which is poor in blood vessels, is closely connected in all animals with the posterior lobe, which is abundantly provided with blood and lymph vessels, and which, on account of its purely neuroglial structure, must be regarded as a conductor for the secretion of the pars intermedia rather than a secreting gland.

In some species of animals definite "pathways" from the secreting glands of the pars intermedia to the posterior lobe can be demonstrated. Since colloid is found only in old individuals in both the anterior lobe and the pars intermedia, it must be regarded not as a normal secretion but as an evidence of degenerative processes. However, it may be taken as an indicator of the course followed by the normal secretion which cannot be demonstrated. While the pars intermedia is most highly developed in the lower mammals, and steadily decreases in size as we rise in the scale, in man the prehypophysis is most highly developed. Throughout the whole animal kingdom it is connected only slightly with the pars intermedia and the posterior lobe, frequently by a connective tissue septum or a small pedicle (Sauropsida). In the amphibians the two parts lie side by side without any organic connection, and in mammals they are separated by the hypophyseal recess. Therefore it is probable that the secretion of the anterior lobe is not conducted through the posterior lobe but is discharged directly into the blood.

The glandular cells are located on the epithelium of the blood vessels; in the vessels a coagulated secretion can often be demonstrated. The author agrees with Benda and Creutzfeld as to the identity of the three kinds of cells of the anterior lobe, in that he regards them as only different stages in the development of one kind of cell. In the lower animal orders there are frequently masses of secretion lying between the vessel walls and cells.

As the result of his experiments the author concludes that the theory that the parts of the hypophysis have different internal secretions, is confirmed by their morphological character.

TÖLKEN.

Austoni, A.: *Experimental Compression of the Hypophysis* (Sulla compressione artificiale del l'ipofisi). *Polichin.*, Roma, sez. chir., 1913, xx, 159.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author claims priority over Chiasserini in experimental investigations on the hypophysis in situ, since in his article on hypophysectomy (Padova, Edit. Soc. Coop. Tip., 1912) he gave a new method for studying the function of the gland. In order to overcome the severe traumatism which occurs during the removal of a gland for the purpose of eliminating its function, the author introduced a laminaria bougie close to the hypophysis for the purpose of slowly compressing it in situ. By means of this artificial tumor he wished to determine conclusively whether the explanation of the hypophysis symptoms (acromegaly, dystrophia, adiposogenitalis, glycosuria, somnolence, cachexia, hypophyseopriva) on the basis of the mechanical action of the tumor is correct. The object was not so much to clear up the syndrome of acromegaly as to decide whether it was the pressure on the pituitary body or upon the neighboring parts of the base of the brain that called forth the dystrophia hypophysialis.

Dogs were used for the experiments, but monkeys are better adapted. All of the animals were young and fully developed. The control dog was of the same sex, race, and age as the other. In the one the dry, sterilized laminaria bougie was introduced between the hypophysis and the base of the brain, while in the control the parts were exposed in the same way but the bougie was not introduced. In looking for the hypophysis the author used a new procedure for craniectomy temporosphenoidalis similar to the Hartley-Krause method for resecting the gasserian ganglion. On the right side of the head a horseshoe-shaped flap, including skin, temporal muscle, and periosteum, was made. This was turned upwards. By opening the mouth the coronoid process was drawn downward, the upper part of the pterygoid muscle was freed, and in this way the anterior inferior part of the parietal, the squamous portion of the temporal, and the greater wing of the sphenoid bones were laid bare. All of these parts were removed to the crista sphenotemporalis, and thus the brain could be raised so as to expose the hypophysis. The author recommends the same procedure for the operation on the human being. The method is preferable to Paulesco's, for in laying the scalp flap downward one has less room below and must do more trephining, besides being obliged to raise the brain much higher. It is also better than the modification of Chiasserini in which the flap is not resected and the temporal muscle is cut across.

STREITZLER.

Preysing: *A New Method of Operating upon the Hypophysis* (Beiträge zur Operation der Hypophyse). *Internat. Zentralbl. f. Laryngol., Rhinol. u. verw. Wiss.*, 1913, xxix, 401.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Preysing recommends operating on tumors of the hypophysis by resecting the hard palate. This

method is especially valuable for very large tumors, for which the author has used it in four cases. He believes it offers a closer approach to, and a better view of, the field of operation than any procedure that has been used previously.

DENK.

Holmgren, G.: Operations on the Hypophysis by the Nasal Route (Über transnasale Hypophysisoperationen). *Hygiea*, 1913, lxxv, 481.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author gives a very detailed description of a case of tumor of the hypophysis which he observed and operated upon. The patient was a man thirty-four years of age, who had always been well previously. For two years he had had periodical headaches which varied in intensity and were more severe on the right than on the left side. Visual disturbances were first noticed in the left eye and then in the right. After a year there was only partial perception of light on the temporal side of the right eye, and the visual acuity of the left eye had decreased to 2/60. On admission to the hospital the patient could count fingers with the left eye only when they were held immediately in front of the eye. There was temporal hemianopia and the visual field was very much decreased concentrically. The right eye had not changed since the previous examination. On both sides there was marked optic nerve atrophy. Polyuria was marked. Great changes in the X-ray picture. Hirsch's operation was performed. Technically it was easy until the point of incising the dura was reached. The entire roof and posterior wall of the sphenoidal sinuses was simply a mass of soft, red, pulsating tissue pushing forward into the sinuses. The operator could not find any definite tumor so he merely punctured the dura and curetted. The operation lasted for one and one half hours. Iodoform gauze tampons were placed in the nasal cavities. There was no drainage of the sphenoid sinuses. The operation was followed by a transitory rise of temperature and complete blindness for a few days. This the author attributed to the fact that the sphenoid sinuses and the cavities in the tumor had filled up with blood that was not entirely sterile. After a month the patient could count fingers at a distance of one meter from the left eye. The visual field increased on the nasal side. The pupils were not so pale as before the operation. Three weeks later the patient was well, could read the time on his watch, and was able partially to carry on his work of farming.

GIERTZ.

Johnston, G. C.: The Radiology of the Pituitary Body in Epilepsy and Pituitary Disorders. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.

By Surg., Gynec. & Obst.

Johnston has made X-ray studies of the pituitary fossa in some eighty cases of epilepsy, which included principally patients who developed epilepsy between the fifteen and thirty-fifth year and did not include patients who showed epileptic attacks as a

part of the symptom-complex attendant upon pituitary struma. He has been struck by the practically constant occurrence in such cases of a marked hypertrophy or hyperostosis of the posterior clinoidal processes which results in an apparent roofing of the fossa with consequent encroachment upon and interference with the posterior lobe of the pituitary.

Attention is called to the work of Cushing, who has shown that posterior lobe hypo-pituitarism will produce epilepsy and believes that this is the probable explanation of the cause of the attacks in the class of patients described. He shows repeated examples of this type of anatomical deviation in this class of cases and states that the feeding of posterior lobe extract to such patients is followed by interesting results.

The author makes no attempt to explain the occurrence of the hyperostosis beyond the statement that syphilis seems to play no part and that in some of the cases the process is apparently active. He makes a plea for the examination of a large number of this class of patients in order that the true percentage showing this condition may be determined. He believes that in some of the cases reported, the gland is so interfered with that its functional activity is hampered and in two of the cases calcareous degeneration of the gland was apparently going on. In many of the cases shown, the shadows of the anterior and clinoidal processes not only meet but decidedly overlap. In his own series of cases this condition was found to be present to a greater or less degree almost invariably.

In order to be of value the examination must be made with strict attention to the planes of the skull so that distortion may be avoided. In the cases shown and described, pituitary tumors were excluded although a number of such cases showing epilepsy as one of the symptoms were classified and described separately.

The epileptics examined were selected by the neurologists, McKennan, Henninger, and Mayer. Cerebropathy, cerebral syphilis, etc., were excluded.

NECK

Nicoll, J. H.: The Avoidance of Unsightly Scar Deformities in the Operative Treatment of Cervical Lymphadenitis. *Glasgow M. J.*, 1913, lxxx, 81.

By Surg., Gynec. & Obst.

Reference is made by the author to the changed attitude that the profession has taken toward the treatment of tuberculous joints. A few years ago the attempt was made to remove all of the tuberculous tissue in connection with a tuberculous joint. Nowadays much more conservative measures are followed and more dependence is placed upon the patient's ability to overcome the infection when a slight stimulus is given either through the removal of part of the tuberculous material, the injection of some stimulating drug into the region, or a combination of both measures. The same change toward

conservatism has been noticed in the treatment of tuberculous lymphadenitis, especially that of the cervical region. The radical operation for the clean removal of all of the diseased glands has, in part at least, given way to a more conservative and less disfiguring measure.

The operations which the author emphasizes especially are Treves' operation and Dollinger's operation.

The Treves operation is performed as follows: A small incision is made, usually in the region of, and parallel to, the clavicle. Through this incision the enlarged glands are tunneled out by the dissecting finger. A small gauze wick is placed in the opening for drainage.

The Dollinger operation is very similar but is intended primarily for operations upon glands in the occipital region. The incision is made in the hair line and the lower flap is turned down so as to expose the underlying glands. The latter are then removed *en masse* as far as possible and the wound closed with a small gauze drain.

J. H. SKILES.

Morestin, M. H.: The Excision of the Groups of Cervical Lymph Glands in Cancers of the Mouth and of the Pharynx (L'évidement des gîtes ganglionnaires cervicaux dans les cancers de la bouche et du pharynx). *J. de chir.*, 1913, x, 657.

By Surg., Gynec. & Obst.

Morestin contends that the doubtful prognosis in cancer of the mouth has been due to the delay in surgical treatment and to too-restricted operations. Cancers of the mouth and pharynx remain strictly local for only a very short time; they extend very rapidly into the lymphatics. On the other hand, they very rarely form distant metastases, and thus can be considered quite favorable for complete eradication of the disease provided the surgeon regards not only the initial lesion, but also the entire lymphatic apparatus which drains the region as a cancer that should be removed.

All cancers of the buccal mucous membrane, the lip, the cheek, the floor of the mouth, the tongue, the pharynx, the nasal fossæ, and the jaws, all cancers originating in the skin which have infiltrated the depths, and all cancers of the parotid demand absolutely the extirpation of the corresponding groups of cervical glands. This extirpation may be uni- or bilateral; it can be done at one sitting with extirpation of the primary growth, or may precede or follow the latter. The operative technique varies somewhat according to the site of the primary lesion, the degree of involvement of the gland, whether they be movable or fixed to surrounding tissues, and the degree of the resistance of the patient.

In the cases in which the cervical nodes are not palpably involved, but are to be removed as part of the treatment of the disease, Morestin proceeds as follows: The head is turned slightly away from the field of operation. The incision comprises a star with three branches, the center being at the superior border of the thyroid cartilage, a little

anterior to the sterno-cleido-mastoid muscle. From this center, one incision is carried forward to the symphysis of the chin, the second goes to the anterior border of the mastoid process, and the third travels downward and backward to the clavicle at the posterior border of the sterno-cleido-mastoid. In some cases it is necessary to make a fourth complementary incision extending backward from the inferior end of the third incision along the superior border of the clavicle. The three flaps just outlined are dissected, the upper to above the inferior border of the mandible, the anterior as far as the median line, and the posterior, freed from the aponeurosis of the sternomastoid, well posterior to this muscle. The external jugular vein will be encountered in this dissection with one, two, or three lymph-nodes at its upper extremity. It is ligated above and below and cut at once (Fig. 1). Beginning at the top, the entire inferior border of the mandible is laid bare. The facial artery and veins are cut between clamps in front of the masseter muscle, and the inferior end turned down toward the submaxillary region together with a paramaxillary premasseteric node which generally accompanies them. The submaxillary gland with the nodes found at intervals on its external superior surface is freed from the bone, and the parotid is separated from the anterior border of the sternomastoid as far as the mastoid process. Many veins from the parotid to the external and internal jugulars and to the facial are cut in this dissection. The posterior belly of the digastric is uncovered. Next, going forward, it is necessary to bare the anterior belly of the digastric, to scoop out the interdigastric space, carefully detaching the two or three nodes found there with all the cellular tissue, and to bare the fibres of the mylohyoid to their median raphe. The glands enveloped in cellular tissue are turned back toward the submaxillary region. In the angle formed by the digastric with the inferior border of the jaw, is the submental artery. This is clamped and cut. The submaxillary gland is then easily drawn back, freed from the mylohyoid, and entirely detached by cutting Wharton's duct. After clamping the facial artery as it passes within the digastric and stylohyoid, the emptying of the submaxillary space is completed by laying bare the tendon of the digastric.

In attacking the carotid region, the subhyoid and particularly the anterior belly of the omohyoid are first detached. Then the superficial cervical fascia is incised along the posterior border of the sternomastoid and dissected from behind forward to the anterior border of this muscle, including the external jugular vein with its accompanying lymph-glands. Having freed the anterior surface of the sternomastoid, its inner border is very carefully dissected in its entire length and the carotid region is thus widely opened. The spinal accessory nerve is isolated from the point where it first enters this space until it enters the muscle. Behind this nerve is an important group of glands often buried in a mass of fat. The glands and fat are dissected *en bloc*, the



Fig. 1. Showing the reflection of the skin flaps and exposure of external jugular vein.

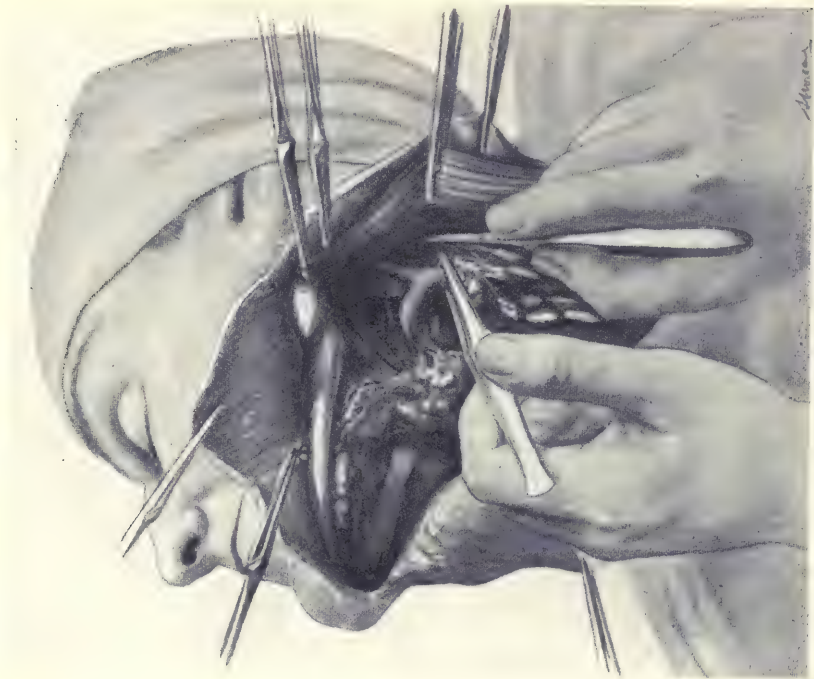


Fig. 2. Dissection from above downward of the lymphatic chain along posterior border of internal jugular vein.

dissection being carried to the deep muscles of the neck if necessary. The freed mass is passed under the spinal accessory and is drawn anteriorly. It is then possible to dissect from above downward the entire chain of lymphatics and cellular tissue along the posterior border of the internal jugular vein (Fig. 2). The jugular vein is carefully cleaned from behind forward, and when the thyro-linguo facial trunk is met it is cut at its junction with the jugular; the emptying of the region is completed by liberating the anterior part of all glands and cellular tissue that it contains and the small amount of cellular tissue around the greater cornu of the hyoid (Fig. 3).

The supraclavicular triangle, the cleaning of which is a precautionary measure that it is well to take, can be emptied either before or after the completion of the preceding step without much loss of time. After the anterior border of the sternomastoid has been freed, the posterior border is exposed in its entire length, the superior border of the clavicle is freed, then the posterior belly of the omohyoid, and then the anterior border of the trapezius, and the entire packet of fat and glands in the supraclavicular triangle dissected up from below. Although this tissue is usually easily separated from surrounding organs, close attention must be given to the jugular vein, the brachial plexus, the phrenic nerve, the transverse cervical artery, and one or two large veins from the trapezius to the subclavian.

When the operation is terminated (Fig. 4) all of the gland-bearing tissue of one side of the neck, except the negligible subhyoid, has been raised in one block and not a single gland has been sought, or cut, or pinched with the forceps. In case the sternomastoid muscle is adherent to the fixed and enlarged glandular masses in the anterior or superior carotid regions, the operator can be sure that the internal jugular vein is involved and that both muscle and vein must be sacrificed. As soon as the "star" skin flaps are raised, the skin still being intact, the sternomastoid is cut close to its attachments to the clavicle and mastoid. The jugular vein is bared beneath the omohyoid, divided between clamps, and separated from below upward from the carotid and pneumogastric. The supraclavicular triangle can then be easily cleaned. The common carotid, the internal carotid, and the pneumogastric can usually be spared. As the anterior-superior carotid region is most involved, it is not attacked until the submaxillary, and then the inferior carotid, supraclavicular, and posterior carotid regions are finished. The order of attack may be varied, but should always converge upon the region most involved which is left to the last. Resection of the sternomastoid often shortens the time of operation.

The technique varies a little if the supraclavicular or submaxillary groups are adherent. This last complication is met with frequently and is handled by beginning the operation by cleaning the supraclavicular and carotid regions and ending by the ablation *en bloc* of the submaxillary region with a part of the mandible.

If the glands at the base of the neck are large and adherent, the author advises resection of a half or even the inner two thirds of the clavicle to facilitate the dissection of the region. No bad functional results follow this procedure.

The technique used and the decision as to whether a one- or a several-stage operation should be performed depends upon the location of the tumor and the condition of the patient. The one-stage operation is the operation of choice.

In cancers of the floor of the mouth, Morestin considers it essential to remove all of the lymphatics of both sides of the neck. This operation he performs in three stages: first, total excision of the glands of one side; second, the total excision of the glands of the other side; and third, the excision of the structures of the floor of the mouth with resection of the mandible, usually at the level of the second molar. This procedure is adopted in order to avoid infecting the deep structures of the neck when opening into the mouth cavity. One, or at most, two weeks, are allowed to intervene between the steps.

In cancer of the tongue, the operation is performed preferably in one stage owing to the distortion of tissues which renders a two-stage operation exceedingly difficult. If the tumor is confined to one lateral side of the tongue, the suprahyoid, the anterior and posterior carotid, and the supraclavicular groups of the affected side, and the suprahyoid, the anterior and posterior carotid groups to the anterior belly of the omohyoid of the sound side, are excised. The dissection is commenced from below, always working from below upward and from behind forward. Before opening the buccal cavity, the anterior border of the sternomastoid is sutured to the subhyoid and digastric muscle and to the pharyngeal wall in order to protect the carotid region from infection. The tongue is divided exactly in the midline from tip to base. All remaining tissues are utilized as well as possible to close the defect and the wound packed tightly with iodoform gauze. The only other drainage is one rubber tube placed inferiorly in the line of incision, and another through a stab in the posterior flap. This technique is varied somewhat according to the seat and size of the tumor. Minute details of technique for each case are carefully described.

In cancer of the cheek and of the labial commissure it is necessary to excise all the glands of the affected side with resection of the mandible between the tumor and the submaxillary gland, and all the suprahyoid glands of the opposite side. This operation is performed preferably in two stages, the first being the excision of the tumor with all the suprahyoid glands of both sides; the second, the extensive dissection of all the glands, including the supraclavicular gland, of the affected side.

For ordinary cancers of the lip a one-stage operation is performed. The glandular dissection is not carried beyond the anterior carotid group. The only precaution is to close the incision for the glandular dissection before attacking the tumor.

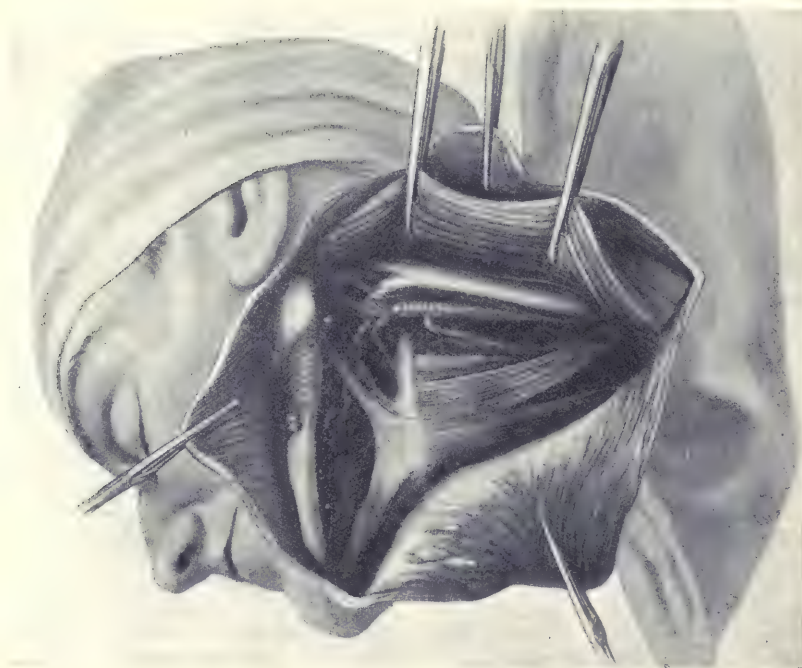


Fig. 3. Appearance of neck after complete gland resection of one side.

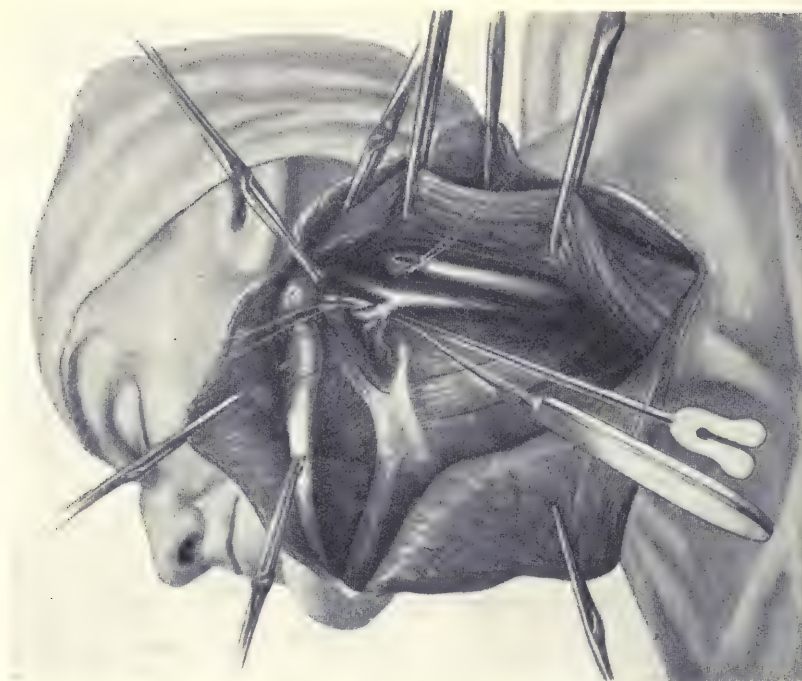


Fig. 4. Showing method of ligating the facial thyrolingual trunk of the internal jugular vein.

In tumors of the pharynx or pharyngo-larynx, the primary tumor is often continuous with the metastatic glandular involvement, and the intervention is exceedingly grave owing to infection. However, if the tonsil is the seat of the primary growth, it can be excised from within the buccal cavity, splitting the cheek if necessary, and the glandular dissection can be carried out at the same, or at a subsequent sitting, with no danger of buccal contamination.

In a chapter devoted to the accidents of operation and sacrifices imposed by the extent of the lesions, the author reaches these conclusions: The sternocleidomastoid muscle may be completely excised without causing any noticeable functional disability to the patient. The internal jugular vein of one side may be readily sacrificed without fear of cerebral stasis. Ligation of both veins is fatal; sometimes part of the wall alone is involved in the growth, and longitudinal section with suturing of the cut edges is possible. Transplantation of the external jugular to take the place of the excised portion of the internal jugular is not difficult, but it is hard to keep the patient alive during the procedure. If symptoms due to venous stasis from ligation or diminution of the internal jugular vein occur, the author recommends compression or ligation of the common carotid. The external carotid may be ligated without fear. Ligation of even one common or internal carotid almost uniformly causes hemiplegia with rapid death. An arterial graft, theoretically indicated, is never successful. Usually the carotid, though completely surrounded by the tumor, is itself free, and an attempt should always be made to separate it from the surrounding tissues. Section of one vagus nerve is never fatal, and hardly ever gives any symptoms. Section of the spinal accessory and hypoglossal nerves leads to loss of function of the muscles supplied by these nerves; otherwise their section is harmless. Wounding of the thoracic duct is not serious, because the ligation of this duct is not followed by any untoward effects. Thus it is seen that the carotid artery alone must be scrupulously guarded. All other structures may be safely divided.

The post-operative complications of this extensive dissection of the neck are few. Bronchopneumonia, as in all surgical treatments of the mouth and pharynx, is frequent. The conditions are peculiarly favorable for extensive infection of the wound — the most common serious complication. As almost all cellular and connective tissue is removed at the time of operation, the inflammation tends to spread along muscles and the walls of blood vessels. As soon as it is seen that the infection is spreading in spite of good drainage, the wound should be widely opened and treated with a powerful antiseptic — tincture of iodine. Ulceration of the internal jugular vein may accompany infection of the wound and is best treated by a tamponade of iodoform gauze which should be gradually and carefully removed several days later. Arterial ulceration, less common,

is almost always fatal. The first sign is an insignificant hæmorrhage, which, stopping spontaneously, is inevitably followed by a larger hæmorrhage unless the bleeding points be effectively cut off. This is almost impossible as the seat of the hæmorrhage is usually at the origin of the external carotid. The author recommends suturing the opening in the bleeding artery and burying it as deeply as possible in the tissues. Œdema of the glottis is usually an immediate complication occurring the day of operation. It is noted only in those cases in which the neighborhood of the glottis and aryteno-epiglottidean folds has been involved. Spasm of the glottis, which may be fatal, is observed at the time of the anæsthesia, the dissection of the second half of the neck, or the ablation of the tumor when this is practiced as a third-stage operation. The operator should always have at hand instruments for a tracheotomy.

The results of the operation depend principally upon whether or not the buccopharyngeal cavity has been entered. If it has not, the mortality is practically nil. Otherwise, a large percentage of cases die of bronchopneumonia. The mortality from this cause and from sepsis, however, can be materially diminished if the carotid space be effectively walled off by sewing the anterior border of the sternomastoid to the subhyoid, the digastric, and the stylopharyngeal muscles. It may be diminished also by performing the operation in several stages. Functional disturbances due to extensive destruction of tissue are remarkably few. The only disturbances are those due to cicatrization, which leaves the tissues thick and hard. Recurrences in early cases are very rare. When the growth does recur it is usually at the original site and is due to a too-limited excision, "rests," the fact that the infiltration was so extensive that it could not be removed completely, or the limiting of the operation by the precarious condition of the patient. The enduring "cured" cases are due first to the broad excision of the primary tumor, but above all to an eradication of the lymphatics, minutely and anatomically conducted.

The author concludes finally that in buccopharyngeal cancers it is absolutely necessary to join excision of the corresponding cervical ganglia to ablation of the tumor if we would entertain the hope of cure; that the extirpation of the ganglia should be systematically performed as a necessary adjunct to any operation looking toward cure and is often more important than the ablation of the tumor itself; that the excision of the cervical ganglia should be made *en bloc*, all the cellular-adipose tissue being removed with the lymphatics, all the important organs of the carotid and supraclavicular regions being bared, and the submaxillary space being completely emptied. It is desirable to complete the operation in one step, particularly in cancer of the tongue or pharynx, and the ideal is to remove all of the tissues, including the tumor, in one mass. Sometimes it is necessary to divide the operation

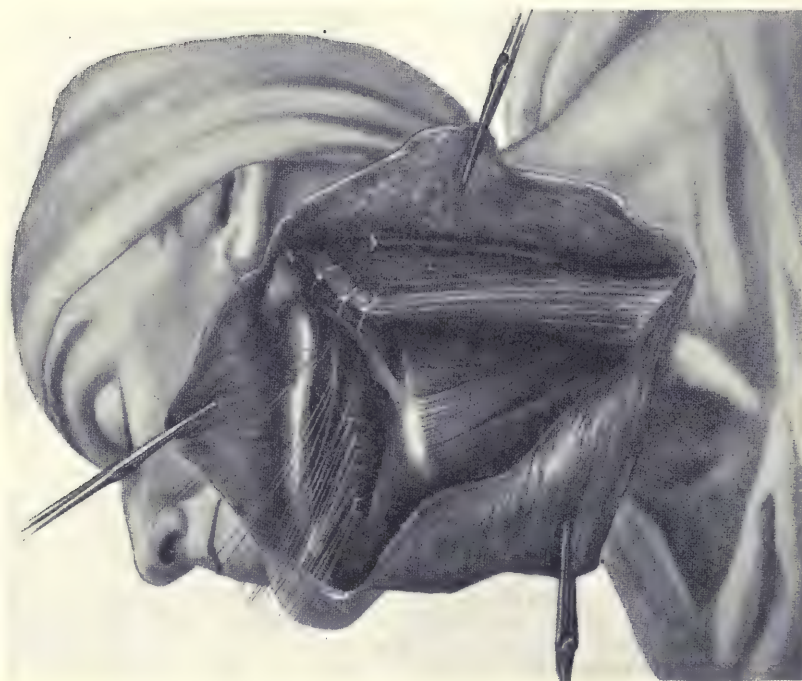


Fig. 5. The suturing of the anterior border of the sterno-cleido-mastoid to the stylohyoid, subhyoid, and muscles of pharyngeal wall.



Fig. 6. The completed operation with gauze packing and drains in place.

into two or three stages in order to render it supportable. In these cases, ligation, or better, excision of the external carotid with its branches, is a wise precaution. If the buccopharyngeal cavity is opened at the same stage that the carotid region is exposed, the latter should be sealed off from the former by suturing the sternomastoid muscle to the subhyoid, the digastric, and the pharyngeal wall. If the lymphatics are adherent, the sternomastoid, the internal jugular, and pneumogastric of one side may be sacrificed without fear. The internal and common carotid must be preserved at all cost and can almost always be separated from the agglutinated glands which surround them. Resection of the clavicle permits a more extensive operation and the removal of apparently firmly adherent lymphatics. The prognosis is best when the lesions are least advanced, the ganglia most movable, and the subject most resistant. It is the more satisfactory as to distant results the more the eradication is completely, minutely, methodically, and anatomically conducted. All in all, a good technique allows us to face this surgery with confidence, and proves that the radical cure of these cancers can be regularly obtained if the patients are operated upon as here advised and at an opportune time.

ELLIS FISCHEL.

Graham, A.: Tumors of the Carotid Body; with a Report of Two Cases. *Cleveland M. J.*, 1913, xii, 537.
By Surg., Gynec. & Obst.

The author gives a brief resumé of the difficulties that were encountered in classifying the tumors of the carotid body until Stillings classified the carotid gland with the sympathetic nervous system, basing his classification on the large amount of nerve tissue that the gland contains and the close relation that it bears to the sympathetic nervous system.

The only lesion of the carotid body so far described is a characteristic tumor, and the descriptions of all of the new growths have been quite similar. Up to 1913, thirty-five cases have been reported.

The author gives two additional case histories with descriptions of the operations. The operations were performed by Crile. A very complete description of both the gross and the microscopical structure of these tumors forms the larger part of the article. There are nine illustrations of the specimens and microscopical sections. The tumors described correspond very closely clinically, anatomically, and histologically to the other tumors of the carotid gland reported. Graham does not attempt to classify the tumors specifically, as the embryological origin of the gland has not been definitely settled.

In thirty-six cases of which complete case reports are given, the tumors occurred in 19 males and 17 females. The average age at which they were found was 36 years; the youngest patient was 7 years of age, and the oldest, 63. In twenty-two cases all three carotids were ligated, and in five, the external carotid alone. In seven cases the tumor was re-

moved without injury to the vessels. In six cases there was injury to the vagus nerve; in eight, to the hypoglossal; and in four, to the sympathetic. Hemiplegia occurred four times. Four of these patients lived and one died. In one case the patient suffered cerebral hemorrhage but recovered. In four cases there were recurrences: in three, after ligation of the carotid with removal of the tumor, and in one, after the removal of the tumor only. Two cases recurred within a year, one in four months, and the other in two months. The results in two cases operated upon are not stated. In two cases death resulted from pneumonia; in three, from hemorrhage and shock; and in one, from hemiplegia. In one case death occurred from cerebral hemorrhage nine months after the patient left the hospital, and in another, from recurrence at the end of a year. A complete bibliography is appended.

DONALD GORDON.

Guibal, P.: A Contribution to the Surgery of the Neck. Is Unilateral Resection of the Internal Jugular and Pneumogastric Harmless? (Contribution à la chirurgie du cou. La résection unilatérale de la jugulaire interne et du pneumogastric, est-elle inoffensive?) *Rev. de chir.*, 1913, xlviii, 96.
By Journal de Chirurgie.

Unilateral resection of the internal jugular and pneumogastric is generally considered harmless. The following cases added to several others already published tend to disprove this.

A man of fifty-five was suffering from a pavement cell epithelioma of the right vocal cord and there were scarcely perceptible lymph nodes along the course of the left carotid.

At the first operation the ganglions, the left internal jugular, and the pneumogastric were resected with no immediate trouble. Later a tracheotomy was performed. At five in the evening the patient was semi-comatose, respiration 40, pulse 118, temperature 38° C. On auscultation there was a splenopneumonia of the left side and a paresis of the right. The next day complete coma and right hemiplegia, respiration 40, pulse 130, temperature 38° C., and a double pneumonia. Death occurred forty-eight hours after operation.

Guibal believed that the rapid oncoming of pulmonary lesions could be ascribed only to the section of the pneumogastric, although such trouble after surgical section of the vagus is rare. The cerebral symptoms could be ascribed only to the ligation of the jugular vein. There were no symptoms or signs of trouble in the carotids. Autopsy was not possible.

In this case the symptoms were similar to those reported by Luise, Kummer, and von Bruns, which were controlled by autopsy. The cerebral symptoms were due to venous hypertension of the brain, giving symptoms on both sides, but especially on the side of the ligation. In general, these symptoms are due to insufficiency of the remaining jugular. Exploration of the jugular before operation would be of no

avail, however, as aphasia of the sinus portion would not be noted.

J. OKINCZYC.

Edmunds, W.: Thyroid. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1.
By Surg., Gynec. & Obst.

This paper is the ninth of a series by the author and deals largely with the metabolism of sugars in dogs who have undergone total thyro-parathyroidectomy and have survived on a milk diet supplemented at times by additional calcium lactate. The author reports the cases of dogs living and in good condition eight and fifteen months after total thyro-parathyroidectomy, having been kept on a milk diet during that time. He adds the interesting observation that animals will survive total thyro-parathyroidectomy if they are fed large quantities of milk but that they will not survive if the milk is obtained from thyroidectomized animals. This would indicate that the comparatively larger amount of calcium salts ingested in the milk does not alone account for the survival. Comparing the results of urinalysis after feeding glucose and lactose to both normal and thyro-parathyroidectomized dogs, the author concludes from a small number of observations that in dogs the thyroid gland hinders the assimilation of sugar, while the parathyroid gland favors the assimilation, and that the parathyroid action favoring assimilation is greater than the thyroid action hindering it.

H. B. LODER.

Busch: Pathological Changes of the Thyroid Gland in Syphilis (Zur Frage der Schilddrüsenveränderungen bei Syphilis). Dissertation, St. Peterb., 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author investigated the morphological changes of the thyroid gland in congenital and acquired syphilis. To differentiate syphilitic changes, the influence of other factors, especially of infectious diseases, must be excluded. In the first chapter the "iron-hard strumitis" first described by Riedel is mentioned and is considered probably not a clinical entity but as due to syphilis or tuberculosis.

In the second chapter Busch gives a short review of the investigations of thirty-six cases of syphilitic thyroids reported in the literature. Of these, fifteen were carefully examined. He concludes that there are two syphilitic processes that can occur in the thyroid gland: the interstitial and the gummatous. In the remaining twenty-one cases the diagnosis was made *ex juvantibus*. Of special interest are seven cases of definite Basedow's disease to which the author adds two more. In all of these potassium iodide was administered in large doses. It was well tolerated and caused permanent improvement notwithstanding symptoms of hyperthyroidism and Kocher's warning not to employ iodine in goiter cases.

The author's conclusions tabulated in chapter four are as follows: The average weight of the thyroid gland of premature syphilitic fetuses was 32 per cent greater than those of the control cases; in full-term syphilitic children, however, the weight

was 36.6 per cent less. In premature syphilitic children the inter- and intralobular connective tissue was a little stronger. In adults with acquired syphilis the interlobular connective tissue was more developed. The average size of the gland lobules and follicles was larger in all syphilitic cases than that of the controls. In the premature cases the dark, firm colloid made its appearance earlier and was more frequent. Vacuolization was marked whereas in the controls it was entirely absent. In full-term syphilitic children and in adults the dark colloid also occurred. Vacuolization, however, was less marked than in the control cases. Cellular desquamation appeared more marked only in the premature syphilitic children. No appreciable difference was found in the size and form of the nuclei of the follicular epithelium. The number of fat droplets in the follicle cells was greater in syphilitic than in normal thyroids. The quantity of blood in the syphilitic gland was greater. The condition of the vessels was surprising. The changes which in other organs are considered as pathognomonic for syphilis occurred in the thyroid only exceptionally and then only to a slight degree. In all of the cases there were noted conglomerations of nuclei which must be considered as the antecedent stage of a follicle. They are, therefore, more common in young than in old glands.

From all of these findings the conclusion must be drawn that changes of the thyroid gland in congenital, as well as in acquired, syphilis are not in any way specific. They are more quantitative than qualitative in nature. In congenital syphilis the gland develops earlier, colloid appears earlier in its follicles, and fat appears in the follicle epithelium earlier and in larger quantity than in the controls. The functional changes of syphilitic glands naturally must be quantitative in nature. In view of the microscopical findings, the function must begin very early. Later it must be inferior to that of normal glands. Extensive chemical and hematological investigations must decide this. Six microphotographs and twelve large tables accompany the monograph.

STROMBERG.

Krecke, A.: The Effect of Thyroidectomy on Thyroid Affections (Der Einfluss der Strumektomie auf die Thyreosen). *Deutsche Ztschr. f. Nervenhe.*, 1913, xlvii-xlviii, Festschr. v. Strümpell, 337.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Krecke asserts that from 50 to 60 per cent of his goiter patients have general disorders either of the nervous system, the circulatory system, or of metabolism. These disturbances he designates as "thyreoses" and divides into three grades. Of the first grade are general disorders of metabolism accompanied by merely a subjective feeling of palpitation. The second grade includes those cases with tachycardia and a pulse beat up to 120 per minute, but without exophthalmos. The third grade includes cases that show the typical picture of Basedow's disease.

The author calls attention to the occult thyroid disorders which are difficult to diagnose. For confirmation of the diagnosis he recommends the administration of iodine or thyroid gland tablets which increase the thyroid symptoms. Kocher's blood picture and the ineffectiveness of digitalis on the pulse also help to confirm the diagnosis.

Of 87 patients operated upon for goiter, 54 had thyroid symptoms. In 32 of these cases the symptoms were of the first degree, in 17, of the second degree, and in 5, of the third degree. Later reports from 44 of these patients showed that 50 per cent recovered and 30 per cent had improved. A small number were not helped at all, or helped only slightly. It is probable that these had nervous disturbances of some other origin, or that other ductless glands were involved.

ERNST SCHULTZE.

Wilson, L. B.: Notes on the Pathology of Simple and Exophthalmic Goiter. *Med. Rec.*, 1913, lxxxiv, 373. By Surg., Gynec. & Obst.

This paper is a review of the pathology of the thyroid glands removed from 1,208 patients in the Mayo clinic who presented symptoms that would ordinarily be diagnosed as exophthalmic goiter. For purposes of control, the pathology of 585 thyroids removed from patients whose condition would ordinarily be diagnosed as simple goiter are also given.

The following classification of the histological conditions has been followed in these studies:

- I. Embryonic (undeveloped) thyroid.
- II. Normal (resting) thyroid.
- III. Vascular changes.
 1. Hyperæmia.
 2. Hæmorrhage (including resulting cyst formation).
- IV. Inflammations.
- V. Progressive changes.
 1. Hypertrophy (functional, with hyperæmia).
 2. Hyperplasia ("exophthalmic" goiter).
 3. Adenomatosis (multiplication of acini without encapsulation).
 4. Regeneration (of previously atrophic parenchyma).
- VI. Retrogressive changes.
 1. Retention of secretion (colloid goiter).
 2. Atrophy (of parenchyma).
 3. Degenerations.
 - a. Colloid (of parenchyma and stroma).
 - b. Hyaline.
 - c. Amyloid.
 - d. Calcareous.
 - e. Cystic.
- VII. Tumors.
 1. Benign.
 - a. Foetal adenomata (encapsulated).
 - b. Adult adenomata (encapsulated).
 2. Malignant.
 - a. Mesotheliomata.
 - b. Carcinomata.
 - c. Sarcomata.

Much of the trouble in interpreting the pathology of the thyroid gland has come from the associated difficulty of definitely grouping the clinical symptoms. Recently, however, Plummer has sharply differentiated the toxic symptoms of goiter into two clinical groups: (1) toxic exophthalmic; and (2) toxic non-exophthalmic. Plummer points out that beside sooner or later exhibiting the symptom of exophthalmos, the cases of the first group are acute and in many respects resemble the symptoms of acute alcoholism, while those of the second group are chronic and in many respects parallel the symptoms associated with arteriosclerosis from chronic alcoholism. In this latter group are many cases so mildly or so aberrantly toxic that clinicians in the past have frequently listed them as simple goiters. Plummer suggests that this latter term should be abandoned by the clinician and the term "non-toxic" substituted for it.

The author's conclusions were as follows:

1. A detailed pathological study of fixed tissue preparations of the thyroids removed from adults and the finding thereby of marked primary parenchymatous hypertrophy and hyperplasia permits the pathologist to diagnose exophthalmic goiter with above ninety-five per cent accuracy. At the same time, a consideration of the data above mentioned will permit him to estimate the stage of the disease in about eighty per cent of the cases, and the severity of the disease in about seventy-five per cent of the cases.

2. A similar study of thyroids from adult patients and the finding thereby of no marked hypertrophy, hyperplasia, or regeneration of parenchyma will permit the pathologist to diagnose non-toxic goiter with about seventy-five per cent accuracy.

3. The most difficult cases to diagnose pathologically are those of the clinical toxic non-exophthalmic type. While these are not hyperplastic, they may fall into any of the other above-mentioned groups. Our knowledge of these cases is still too incomplete to permit us to draw conclusions concerning the details of their pathology.

4. On the whole, it would appear that the pathologist has quite as much data for the estimation of the clinical symptoms of exophthalmic goiter from the pathological data that can be obtained from a study of the thyroid as he has to estimate the clinical symptoms of Bright's disease from the pathological data that can be obtained from the study of the kidney.

Roussy, G., and Clunet, J.: Lesions of the Thyroid in Basedow's Disease (*Lésions du corps thyroïde dans la maladie de Basedow*). *Rev. Neurol.*, 1913, xxi, 1. By Journal de Chirurgie.

It is generally agreed that Basedow's disease is due to a disturbance of the thyroid, and treatment is directed to the thyroid. There has been great difference of opinion, however, as to just what condition of the thyroid it is that causes the disease.

Roussy and Clunet report an histological study of ten thyroids from patients who presented a Basedow syndrome. Three of these patients had true Basedow's disease; three, goiter with secondary Basedowian changes; and two, thyroid cancer presenting the Basedow syndrome.

In the five cases of true Basedow's disease in young subjects in whom exophthalmos, tachycardia, and trembling appeared at the same time as diffuse hypertrophy of the thyroid, the structure of the gland was found to be homogeneous throughout and to present the following characteristics: (1) Hypertrophy and proliferation of cells which showed a tendency to become cylindrical and to form intra-acinous vegetations; (2) the lumens of the acini were very small, filled with chromophobic colloid, and slightly or not at all retractile; (3) atrophy of the stroma; and (4) in three cases out of five there were true lymphoid follicles in the stroma, some of which presented a clear center.

In the three cases of goiter, there were found different types of the structure of simple goiters in different areas (cysto-adenoma, simple colloid goiter, foetal goiter and goiter with small acini; beginning, advanced, and calcified sclerosis, and myxoid and colloid degeneration of the stroma). On examining a

large number of sections, however, the authors found in all three cases small areas which presented the histological picture of true Basedow's disease.

In the two cases of cancer with the Basedow syndrome the cancer cell was a cylindrical thyroid cell, secreting a ductile chromophobic colloid.

The authors therefore regard the thyroid picture in Basedow's disease as characterized by proliferation of cells, cylindro-cubical in form, and a ductile and chromophobic state of the colloid. The presence of true lymphoid follicles in the stroma is frequent but not specific.

In true Basedow's disease these lesions extend throughout the gland: in the goiter with secondary Basedowian changes, they exist in islands; and in thyroid cancer presenting Basedow's syndrome they characterize the neoplastic changes.

The Basedowian structure may be observed not only in this disease, but in cases of intense thyroid hyperplasia, or rapid development, such as occurs in animals where compensatory hypertrophy has followed removal of nine-tenths of the thyroid tissue.

These conclusions agree with those of Rubens Deval (4 cases) in France; of Wilson (294 cases) in the United States; of Zander (14 cases) in Germany; and of Kocher in Switzerland. JEAN CLUNET.

SURGERY OF THE CHEST

CHEST WALL AND BREAST

Pfahler, G. E.: The Treatment of Recurrence and Metastases from Carcinoma of the Breast. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

This report is based upon a study of fifteen cases which have yielded good results from treatment with X-rays. The patients have remained well from one to nine years.

In addition to the use of the X-rays, thyroid extract was prescribed in small doses, beginning with one half grain, and being gradually increased to one and a half grains, three times a day. The addition of thyroid extract was based upon two theories: first, that as a result of the X-ray treatment, the thyroid secretions are progressively diminished; and second, that at the age when carcinoma develops, the thyroid secretion naturally tends to diminish.

The treatment described has seemed to increase the nutritive powers of the body, and to give better results than were obtained without thyroid extract.

The object of the article is to prove that even advanced carcinoma can be influenced by X-ray therapy, and that there should be no hesitation in ordering X-ray treatment immediately after any operation for the removal of carcinoma of the breast, or at the latest, when recurrence is noted.

The X-ray treatment must be thorough; the

disease must be attacked from as many different directions as possible, and the skin must be protected by filtration. Following these directions we may hope for better results in the future.

Guleke: Penetrating Injuries of the Chest and Abdomen (Über penetrierende Brustbauchverletzungen). *Arch. f. klin. Chir.*, 1913, ci, 1030. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In penetrating wounds of the thorax there are great diagnostic difficulties in determining whether an intra-abdominal injury also is present. The usual symptoms in such an injury are ambiguous. Muscular rigidity, for example, is found in the beginning of most injuries affecting the lower thoracic region and the diaphragm. In a wound of the diaphragm that did not penetrate the peritoneum Guleke noted a diffuse muscular defense. The retrogression or increase in these phenomena is more valuable in cases which can be observed for a longer period of time. The pulse fails as a diagnostic sign in thoraco-abdominal injuries, because injuries to the pleura often produce a vagus pulse (Sauerbruch, Walther). There is no certain pathognomonic sign of a simultaneous abdominal injury in penetrating wounds of the thorax. The diagnosis may be only very probable from the character and nature of the injury. Observation of from three to four hours is of some assistance.

In regard to the question as to whether a trans-

pleural operation or a laparotomy should be performed in such cases, Guleke believes on the basis of his experience that in large wounds the operation should be transpleural. After the opening in the diaphragm is enlarged, the injured abdominal viscera can be taken care of and the diaphragm sutured. If injury to deeper or retroperitoneal organs is suspected, a laparotomy also should be performed. In narrow and small wound channels produced by a bullet or a fine instrument only a laparotomy should be considered. Suturing the diaphragm is not necessary in such cases.

Five case reports given were as follows: (1) Incised wound of thorax and abdomen with prolapse of the intestine; laparotomy; cure. (2) Thoraco-abdominal puncture, injury to omentum; transpleural operation plus laparotomy, suture of diaphragm, later rib resection and pneumofixation because of pneumothorax; peritonitis; exitus. (3) Percutaneous diaphragmatic puncture; thoracotomy; healing; the puncture ran tangentially to the diaphragm at the rib insertion without injury to the peritoneum. (4) Puncture of chest and abdomen, stomach punctured; laparotomy; peritonitis; exitus. (5) Gunshot wound of thorax and abdomen wound of spleen; laparotomy; healing.

SCHUMACHER.

Kaefer, N.: The Treatment of Fractures of the Clavicle (Zur Behandlung des Schlüsselbeinbruchs). *München. med. Wchnschr.*, 1913, lx, 1599.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

For fractures of the clavicle Kaefer recommends a bandage which is applied as follows: The affected shoulder is firmly pulled backward by one assistant, and the elbow lifted upward by another. A cotton pad is then inserted in the axilla. The arm is pressed against the thorax, and held in this position firmly. The fragment pieces must be well adapted to each other. The point of dislocation is covered with mastisol. Upon this a gauze pad is laid. A strip of gauze is then stretched over the pad. A shoulder piece of plaster of Paris, 20 cm. long, is then modelled around the shoulder and a Desault bandage placed over the moist plaster cast. The twists of the bandage are kept from unwinding by mastisol spread upon the skin. The plaster of Paris cast allows the Desault bandage to be applied very firmly and thus the whole dressing is given great stability. The sound shoulder remains free. In the third week the bandage is taken off and massage and exercise are begun.

HESSE.

Dräseke: Scaphoid Scapula (Zur Kenntnis der Scapula scaphoidea). *Ztschr. f. d. Erforsch. u. Behandl. d. jugendl. Schwachsinn.*, 1913, vi, 468.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The deformity of the shoulder-blade described frequently under the name of scaphoid scapula has been found by Dräseke in 10 to 20 per cent of the cases of Hamburg school children and in 30 per cent of cases of children in the reform school. Kellner found it even more frequently in idiots, so that it is

doubtless a sign of degeneracy. Congenital syphilis is not the sole factor (Graves). Other etiological factors are alcoholism, tuberculosis, severe nervous disease of ancestors, and rickets.

DUNCKER.

Boissonnas: A Contribution to the Symptomatology and Therapy of Thymus Hypertrophy (Ein Beitrag zur Symptomatologie und Therapie der Thymus-Hypertrophie). *Ztschr. f. Kinderheilk.*, 1913, vii, 472.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

CASE 1. A two-months-old girl of healthy parentage. For three weeks noisy respiration, vomiting, cyanosis, inspiratory stridor; a rounded tumor in the jugulum; voice free; dullness under the manubrium with corresponding X-ray shadow. Diagnosis: Thymus hypertrophy with compression of the trachea. Operation: Complete thymectomy. Weight of thymus gland 20 g. Course: Injury of softened trachea by glass drain followed by severe bronchitis and tracheotomy. Eighteen days after the operation, death from bronchopneumonia.

CASE 2. A boy, one and a quarter months old, of sound parentage. Since birth, daily attacks of suffocation. Cyanosis; inspiratory and expiratory stridor; dullness over the thymus. Diagnosis: Thymus hypertrophy. Operation: Resection of the thymus gland. Patient well after three to four months, with slight signs of rickets.

CASE 3. A girl, four and one half years old, of healthy family. Since second week of life audible respirations, attacks of dyspnoea and difficulty in taking nutrition. Cyanosis, inspiratory and expiratory stridor. X-ray treatment. In nine weeks seven X-ray exposures with 2 H.

Of the physical methods, radioscopy and radiography are the most certain for demonstrating thymus hyperplasia. Stridor vestibularis, congenital stenosis of the trachea, mediastinal abscesses, and enlarged bronchial glands must be excluded. In case of severe symptoms with asphyxia an immediate partial thymectomy should be performed, possibly with resection of the sternum. In some cases healing is very gradual because the tracheal rings are soft. Tracheotomy should always be avoided. Intubation gives only temporary relief. In the intermittent forms of thymus hyperplasia, X-ray treatments can be used, but only under clinical observation. At first the condition may become worse. In thymus hyperplasia on a syphilitic basis, specific treatment should be combined with brine baths, which give favorable results.

KLOSE.

TRACHEA AND LUNGS

Mouret, J.: A New Position for Bronchoscopy and Œsophagoscopy and Its Advantages over the Classic Position (Une nouvelle position pour bronchoscopie et œsophagoscopie et son avantage sur la position classique). *Tr. Internat. Cong. Med.*, Lond., 1913, Augus. By Surg., Gynec. & Obst.

As a position for bronchoscopy and œsophagoscopy Mouret prefers to have the trunk and pelvis

bent far forward, and the head extended. If the bronchoscopy or œsophagoscopy is to be done under local anæsthesia, the patient is seated astride a chair; if under general anæsthesia, he lies in a crouching position on his side.

While in the classic position (Killian, Brünings) the bucco-pharyngeal angle is opened from above, the head being lifted and placed in forced flexion, by Mouret's method it is entered from below and the bucco-œsophageal angle is opened "at the side toward the vertebral column." The pelvis is carried far backward and the shoulders far forward.

The position with the trunk and pelvis inclined forward offers several advantages: (1) The patient is in a much less painful position. (2) The operator is always in front of the patient. (3) The introduction of the tube is easier, because the operator is in a more favorable position for introducing it and because the vertebral column, being stretched, rather than packed down as in the ordinary position, does not offer any obstacle to its passage.

The author has performed numerous bronchoscopies and œsophagoscopies by this method for tumors and foreign bodies. For several months he treated an epithelioma of the lower third of the trachea that had been causing terrible crises of asphyxia. He has removed foreign bodies from the bronchi of children of eight or nine years of age under cocaine anæsthesia. Five photographs and thirteen diagrammatic figures representing the different steps in the operation are given.

Lorenz, H. E.: Bronchiogenic Carcinoma (Das bronchiogene Carcinom). *Beitr. z. klin. Chir.*, 1913, lxxxv, 599.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

After an embryological survey, the various theories as to the mode of development of lateral cervical fistulæ and cysts are discussed. The author concludes that the second bronchial cleft is responsible for the formation of a series of lateral fistulæ and that therefore these should continue to be called the bronchiogenic fistulæ. Not all lateral fistulæ, however, are derived from the second cleft. A number, according to the author's view, originate from the thymo-pharyngeal duct. However, as this latter is also a bronchiogenic formation, it is not necessary to give these varieties of fistulæ a separate name. Bronchiogenic carcinomas give a typical clinical picture: as a rule a small nodule first appears in the neck below the jaw. In this condition an incorrect diagnosis is the rule and the possibility of a bronchiogenic carcinoma is only rarely thought of.

Usually an incision is made. This does not heal, and the patient rapidly advances to incurability. The tumor begins to grow rapidly and infiltrates the underlying tissues; neuralgic pains radiating in all directions are felt; the regional lymph glands become involved and hard nodes may form on the opposite side of the neck. At the operation even in early stages there are found quite regularly adhesions with the sterno-cleido-mastoid muscle and also with the

exterior carotid and its branches which naturally must be resected. Ligation of the interior carotid often cannot be avoided. At times resection of the vagus is expedient. Microscopically the tumor looks like a carcinoma of the skin or pharyngeal mucous membrane.

The diagnosis must be made by exclusion on the basis of the absence of primary carcinomas in other places. The differential diagnosis from carcinoma of the parotid or submaxillary gland is very difficult. It is especially difficult in the latter case because here an inflammatory tumor occasionally simulates a neoplasm. The diagnosis from carcinoma or struma of an aberrant thyroid may also be very difficult. The treatment of this extremely malignant neoplasm consists only of radical extirpation of the tumor. Even with extensive operative procedures the prognosis is unfavorable. Statistics comprising sixty-four cases are appended.

COLLEY.

Citelli, S.: Pituitrin in Operative and Spontaneous Hæmorrhage of the Respiratory Passages (La pituitrine dans les hémorragies opératoires et spontanées des voies respiratoires). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The aqueous extract of the pituitary gland has recently been shown to be very useful in prolonged labor caused by atony of the uterus and in hæmorrhage of the uterus because it causes progressive and prolonged contraction of the uterine muscle fibers. From these facts Citelli concluded that perhaps it would give good results in spontaneous and operative hæmorrhage of the respiratory passages, especially in resection of the inferior turbinates. He experimented with an aqueous extract of the posterior lobe of the hypophysis in various conditions.

The author used the extract for spontaneous hæmorrhage in epistaxis, hæmorrhage from the mouth and nose in hæmorrhagic diathesis, and in bronchorrhagia. In operative cases he used it for resection of the turbinates, submucous resection of the septum in nasal polyps, operations on the nasal sinuses, tonsillectomies, etc. In almost all of these the results were excellent. He injected a cubic centimeter of pituitrin beneath the skin or into the muscles about a quarter of an hour before the operation. During and after the operation the hæmorrhage was very slight and he was spared much sponging and tamponing of the nose. If necessary, one or two injections may be made after the operation.

HEART AND VASCULAR SYSTEM

Leporsky: A Case of Prolonged Cessation of Heart Action Resulting from a Needle Injury to the Heart (Ein Fall von langdauernden Herzstillstand infolge einer Nadelverletzung des Herzens). *Russk. Vrach.*, 1913, xii, 118.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author describes the case of a man 26 years of age who fell down six steps on his breast and ran a

needle into the left half of the thorax. The patient was brought to the clinic at once. At that time he was pale and every movement of the hands caused pain. The needle could be felt in the second intercostal space. It moved up and down synchronously with the pulse. Auscultation and percussion revealed nothing abnormal. The pulse was regular but somewhat rapid.

The needle was removed under local anæsthesia. The instant it was removed the patient ceased breathing and immediately afterward the pulse stopped. All possible restorative measures were undertaken, and at the end of twenty minutes the pulse could be felt again. In five minutes it stopped a second time but reappeared again in a little while. This was repeated twice.

The author believes that the phenomena noted were caused, not by a needle prick of the heart itself, but by a needle scratch of the epicardium when the needle was withdrawn that stimulated the inhibitory apparatus of the heart. The same result he has produced experimentally. JOFFE.

Dean, G., and Falconer, A. W.: Primary Tumors of Valves of the Heart. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1. By Surg., Gynec. & Obst.

The authors report a case of tumor of the pulmonary valve, discovered at autopsy in a male, fifty-three years of age, who died of rupture of a sacculated aneurysm of the aorta. During life, there had been no clinical signs to suggest pulmonary valve disturbance. The tumor, pedunculated, the size of a raspberry, arose from the ventricular cusp of the pulmonary valve, which was otherwise entirely normal. Microscopically, the tumor consisted in part of myxomatous tissue and in part of hyaline connective tissue. It was covered by endothelium and was without vessels. The authors collected from the literature thirteen cases of heart valve tumor of similar structure, three pulmonary, three aortic, five tricuspid, and two mitral. They discuss at some length the pathology of the growths and the varying views that have been expressed as to their nature. H. B. LODER.

Delagenière, H.: Pericardiolysis in a Certain Disease of the Heart, or Supercardiac Thoracotomy (De la péricardiolyse dans une certaine affection cardiaque, ou de la thoracotomie supéricardique). *Arch. prov. de Chir.*, 1913, xxii, 317. By Journal de Chirurgie.

Delagenière describes an operation that he calls "pericardiolysis," and which consists in freeing the anterior surface of the pericardium by resecting the part of the thoracic wall that covers the pericardium. This enables the heart to contract with its normal

rhythm and sweep, even if there are adhesions between the heart and the pericardium. Heretofore, only limited resections had been performed, involving portions of the third, fourth, fifth, and even the sixth ribs where they came into relation with the pericardium. Only once had a transverse section of the sternum been removed (Thornburn).

Among thirty-eight cases published there had been only one death from operation, thirty-one successful cases, and six failures. In all of the unsuccessful cases there were valvular lesions. The lack of success may have been due to the fact that the operation was not extensive enough and did not alter the cardiac action sufficiently.

Delagenière describes his own case, that of a woman twenty-eight years of age with a severe cardiac lesion involving the right side of the heart as shown by cyanosis of the lower limbs and a true venous pulse.

Under chloroform anæsthesia a skin incision was made outlining a flap which covered the whole precardiac region. A hole was bored in the lower end of the sternum and the skin incision followed. The sternum, the cartilages, and left ribs, the sternum again above, and the false ribs on the right were resected in succession. The flap was raised and detached from the pericardium and pleura. As soon as the flap was removed the heart bounded into the field of operation, and, striking on the upper intracavicular notch of the sternum, caused asphyxiation. Three more centimeters were removed. The heart then seemed to beat with less difficulty and respiration was normal. The patient was able to get up on the fifteenth day. Before the operation she could do nothing. She now does her daily work as a charwoman and has no cyanosis or œdema. On inspection the rise and fall of the heart on pulsation can be easily seen. The pulse is 78 and regular. Arterial tension is normal.

The author believes that all cases of adherent mediastino-pericarditis should be treated surgically. Often they follow purulent pleurisy and sometimes tubercular pleurisy. In these cases simple resection of from six to nine centimeters of the fourth, fifth, and sixth ribs may suffice. In adherent pericarditis following acute pericarditis with or without valvular lesions, however, only the extensive operation described by Delagenière frees the heart and great vessels completely. This operation is indicated also in ill-defined cardiac disease with or without valvular lesions when there are signs of stasis, as in involvement of the right heart.

The case described belongs in this category and two years after the operation the patient expresses herself as delighted with the result.

GEORGE LABEY.

SURGERY OF THE ABDOMEN

ABDOMINAL WALL AND PERITONEUM

Petroff, N. N.: Experimental Contributions on the Subject of Abdominal Drainage (Experimentelle Beiträge zur Frage der Bauchhöhlendrainage). *Chir. arch. Veliaminova*, 1913, xxix, 195
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author has dealt with the question as to whether a drainage tube or tampon introduced into the abdominal cavity is capable of guaranteeing good drainage, or whether the drain is at once encapsulated and separated from the free abdominal cavity by adhesions. His method of determining this was as follows: A tampon or drainage tube was placed in the artificially infected peritoneal cavity of rabbits. After one to two days, Berlin blue was injected into the abdominal cavity at a point as far as possible from the site of drainage. The tube or tampon were carefully watched. If the coloring matter did not appear in the course of an hour, the animal was killed and an autopsy was performed. The following results were obtained from thirty-six animal experiments: Tampons placed in the aseptic abdominal cavity showed diminished capillarity from the free peritoneal cavity after from five to six hours, and none after from fifteen to twenty-four hours. This depends on the formation of adhesions and the loss of the hygroscopic properties of the gauze. Tampons introduced into the infected peritoneal cavity were adhered to the intestinal loops but were less isolated than in the aseptic cavity. The loss of the hygroscopic properties of the gauze is just as apparent as in the aseptic abdominal cavity. With great regularity it was noticed that the coloring fluid flowed out of the wound next to the tampon, and that the gauze itself did not drain off the fluid. Hence only that part of the tampon which was adjacent to the margin of the wound was of value for drainage. The deeper parts of the tampon were surrounded by adhesions and lay amid the abdominal organs as mucous foreign bodies. The conclusion for practical surgery is that tamponade is well suited to stop hæmorrhage and to isolate a certain region of the peritoneum, but is not suitable for purposes of drainage. For the latter it is sufficient to introduce very short tampons into the peritoneal cavity. Rubber drainage tubes formed fewer adhesions, but the fenestra were frequently occluded by the intestines. In the presence of an exudate the dye drained off even after fifteen hours. In the case of glass drains no isolating adhesions were noticed up to the forty-eighth hour. Petroff discovered that surrounding the drainage tube with gauze, as practiced by many surgeons, paralyzes the suction power of the drain. On the other hand, the introduction of gauze into the lumen of the tube, if the gauze is frequently changed, is designated as rational, because it increases the suction. On the basis of these experiments the author concludes that

drainage of the free peritoneal cavity is possible, at least in the first forty-eight hours. The best drainage material is glass drains.
HESSE.

Allen, L. W.: Ileo-Appendicular Hernia of the Appendix. *Surg., Gynec. & Obst.*, 1913, xvii, 191.
By Surg., Gynec. & Obst.

The author reviews the history and development of the pericæcal folds and fossæ in general and the anatomy and pathology of the ileo-appendicular fossa in particular, with special reference to hernias of the appendix into the latter. To the two cases found in the literature he adds a third.

Moynihan's classification of the pericæcal folds and fossæ clears up the confusion of the past. The primary folds are: (1) the ileocolic or anterior vascular folds; (2) the accessory ileocolic fold; (3) the ileo-appendicular fold; and (4) the meso-appendix or posterior vascular fold. The fossæ formed by these are: (1) the ileocolic fossa; (2) the accessory ileocolic fossa; and (3) the ileo-appendicular fossa. Secondary fossæ are dependent upon secondary physiological adhesions.

In describing the ileo-appendicular fold, Allen states that it contains muscle fibers. To these Luschke ascribes its origin. Moynihan, on the other hand, considers the ileo-appendicular fold to be both muscular and vascular, and bases his views upon the embryological development.

The ileo-appendicular fossa is subject to two pathological conditions, cysts and hernias. The hernias are dependent upon the size of the opening, the firmness of the edge, and the condition of the intestines, plus abdominal pressure.

Von Wistinghausen: Retrograde Incarceration of the Intestine in Hernias (Über retrograde Darmeinklemmung bei Brüchen). *Deutsche Ztschr. f. Chir.*, 1913, cxvii, 212.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In 1895 Maydl declared that a retrograde incarceration was possible only in organs that end blindly, such, for example, as the appendix, and that there is no possibility of retrograde dislocation of the intestinal coil, as the vessels of the mesentery pursue a course perpendicular to the long axis of the bowel and do not pass the hernial sac. This has been shown to be erroneous. In retrograde incarceration, as is well known, the outgoing and incoming loops of bowel are caught in the hernial sac, while the portion of intestine that connects the two loops, the so-called middle piece, lies free in the abdominal cavity. There are three possibilities for the development of retrograde incarceration: The retromigration of the middle piece, as it is forced back in the reposition, or the entrance of two or more intestinal loops into the hernial sac either simultaneously or successively, whereby the middle piece remains in the abdomen. There are cases in

which the coils lying in the hernial sac are healthy and without constrictions, while the middle piece is gangrenous. In other cases the hernial loops may be slightly or severely injured, with moderate to severe damage to the middle loop. Finally, there may be gangrene of all of the loops or marked alterations in the hernial loops, with slight or no injury of the mid-piece. The mesentery of the mid-piece may not be incarcerated, while the latter is completely gangrenous, or the mesentery may show visible alteration, even though it lies quietly in the abdominal cavity. Experiments on the cadaver have shown that in such incarcerations the mid-piece, if distended with gas, becomes sharply kinked, whereby a constricting ring forms in the mesentery (Zugarkade). In this sharp angle the vessels become kinked and nutritional disturbances to the intestine result. The author, however, was not able to make the same findings. Experiments on the intestine of dogs showed that gangrene occurred only when the mesentery of the middle part was drawn into the hernial opening. In spite of the objection that it cannot be assumed that there is enough space in the hernial opening for the intestine to push into the abdominal cavity alongside of an incarcerated loop, etc., the author believes that a knuckle of bowel, even though very small, forces its way amid the loops through the hernial opening as a result of peristalsis. The resulting distension produces traction, which continually draws new intestine into the abdominal cavity, whereby the mesentery remains at first in the hernial sac, and only the parts that are next to the intestine enter the abdominal cavity. At times as a result of high grade tympanites the whole mesentery may be pulled out of the hernial opening. The author does not consider as a retrograde incarceration the prolapse of two intestinal loops in which the connecting loop is not injured materially. In cases in which a retrograde incarceration or hernia duplex is suspected, he warns against attempts at reposition.

RUPP.

Laplace, E.: Thrombosis of the Mesentery. *Tr. Internat. Cong. Med.*, Lond., 1913.

By Surg., Gynec. & Obst.

Thrombosis of the mesentery with its uncertain clinical symptoms is due to an infection which results in a thickening of the mesentery and its blood vessels followed by thrombosis and gangrene of the gut. The infection may be local or may have spread from a neighboring focus.

Infection of the febrile or afebrile type is also accountable for the various forms of phlebitis which occur about the external iliac vein and result in the well-known post-operative oedema of the extremities. The infection is uniform on the right and left sides but will manifest itself at first on the left side on account of the fact that the left iliac artery overrides and compresses the left iliac vein.

The afebrile type of infection may likewise be responsible for such thrombosis which, when finally

loosened, results eventually in pulmonary embolism. In order to guard against this subtle form of infection in post-operative treatment of all abdominal cases, a 1-500 solution of citric acid in water should be administered by the Murphy rectal drip method as a prophylactic.

GASTRO-INTESTINAL TRACT

Holland, C. T.: A Method of Obtaining a Radiograph of the Stomach at Any Particular Phase of Its Contraction. *Arch. Röntg. Ray*, 1913, xviii, 98.
By Surg., Gynec. & Obst.

In a single paragraph is described a practical method of obtaining a radiograph of the stomach at any desired phase of its cycle. The phase desired is found by fluoroscopic observation. By this method also is obtained the number of seconds required for the stomach to complete its cycle, which is usually twenty. By observing a stop-watch that is started at any phase we may determine exactly just when the radiograph of that phase should be taken, as it will return at any multiple of twenty seconds.

HOLLIS E. POTTER.

George, A. W.: The Positive Value of the Röntgen Method in the Diagnosis of Gastric and Duodenal Lesions. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.
By Surg., Gynec. & Obst.

1. The "positive" or "exact" method of röntgen diagnosis of duodenal ulcer depends upon the adequate demonstration on plates of the anatomical condition of the duodenum. This is opposed to the method of diagnosis by "symptom-complexes" of increased gastric peristalsis, hypermotility, gastric stasis, relaxed pylorus, etc. These complexes are only inferential in their evidence, and never positive.

2. Ninety-five per cent of duodenal ulcers occur in the first portion of the duodenum.

3. The first portion of the duodenum is anatomically a constant entity. Germain examined the duodenums of four hundred cadavers, and found the first portion always constant in shape, contour, and general characteristics, unless actually diseased.

4. If the first portion of the duodenum is normal it can be demonstrated by the bismuth method upon a plate. It will be seen as a cap with a characteristic shape and smooth outline. In every normal case it can always be demonstrated upon plates by using some one of the three positions — prone, standing, or lateral. There is no exception to this rule. Apparent exceptions are due to improper technique, and especially to too much reliance upon the fluoroscopic examination.

5. The constant presence upon a series of plates of a constant defect or abnormality in the cap means positively a pathological condition in the duodenum. This may be due to indurated ulcer, adhesions, gall-bladder disease, spasm, etc., which require a differential diagnosis.

6. Every duodenal ulcer which is more than a simple mucous membrane erosion will deform the contour of the bismuth mass in the cap. This deformity is due not to the minute mucosal defect, but to the much larger callus which involves the submucosal and muscular coats.

7. The demonstration of a normal duodenal cap upon a plate definitely rules out the possibility of indurated or surgical duodenal ulcer.

Outland, J. H., Skinner, E. H., and Clendening, L.: A Study of the Mechanism of the Stomach after Gastro-Enterostomy by Means of the X-Ray. *Surg., Gynec. & Obst.*, 1913, xvii, 175.
By Surg., Gynec. & Obst.

The authors studied the physiology and mechanism of digestion by means of the fluoroscope and the X-ray in six patients upon whom gastro-enterostomy had been performed. They attempted to determine in particular whether, after gastro-enterostomy, the food leaves the stomach by way of the pylorus or the stoma, and the rate at which the stomach is emptied. The examinations were made from three weeks to three years after the operation had been performed.

In all cases it was found that the stomach was drained by the gastro-enterostomy stoma. In four, the food left by the gastro-enterostomy opening exclusively, and in two, by both the stoma and the pylorus. The rate of emptying was reduced.

The conclusions drawn from this study are as follows: (1) Gastro-enterostomy, performed properly, is a drainage operation. (2) After gastro-enterostomy, if the stoma is at the lowest part of the stomach in the erect position, the food leaves the stomach almost exclusively by the gastro-enterostomy opening. (3) Under these conditions the stomach is emptied very rapidly. (4) Gastro-enterostomy should be performed only in cases of pyloric stenosis or pyloric spasm due to duodenal or gastric ulcer. (5) The gastro-enterostomy opening should be large and placed as close as possible to the pyloric antrum. (6) When the gastro-enterostomy opening does not quite drain the stomach, the food leaves by way of both the stoma and the pylorus. Even in these cases, however, the stomach empties itself more rapidly than the normal stomach. (7) Clinical failures after gastro-enterostomy are due probably to faulty implantation of the stoma.

Cole, L. G.: Diagnosis and Differential Diagnosis of Gastro-Duodenal Lesions. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.

By Surg., Gynec. & Obst.

Cole claimed that by making several series of röntgenograms of the stomach with the patient in the prone, erect, and lateral positions at various intervals after the ingestion of bismuth and butter-milk, he can make a positive or negative diagnosis of gastric ulcer, indurated ulcer of the stomach, or duodenal ulcer; and that where cholecystitis is associated with adhesions, he can detect the evidences of the adhesions.

His remarks were largely extracts from previous communications based on personal experience in 526 cases. He demonstrated the appearance of the normal "cap" (pilleus ventriculi) and described the physiology of the pylorus as observed röntgenologically and used these normal cases as controls to show the difference between extensive malignant and non-malignant lesions of the stomach.

He recognized his inability to differentiate between early carcinoma and indurated gastric ulcer, but stated that in these cases surgical procedure is indicated regardless of whether the clinical history corroborated the röntgenological findings, and that the lesion should be considered malignant until proven otherwise by microscopical examination of the specimen after its removal. In such a case the surgeon does not know whether he has cured an early carcinoma or prevented one, until he receives the pathological report.

Carcinomas too extensive for removal are readily recognized, and unnecessary surgical procedure may be prevented. Such cases do not require a long series of röntgenograms.

This communication centered around the negative and positive diagnosis of duodenal ulcer or, as the author preferred to call it, post-pyloric ulcer. Cole stated that if a single röntgenogram out of 40 showed a symmetrical "cap" corresponding in contour with the pars pylorica, and if the pyloric sphincter was clear-cut and functionated in a normal manner (previously described), we are justified in making a negative diagnosis of duodenal ulcer of the "cap," 95 per cent of which occur in this portion of the tract.

The positive diagnosis of duodenal ulcer or extensive adhesions from cholecystitis may be made with remarkable accuracy. Ulcers with cicatricial contractions may not always be differentiated from the extensive adhesions usually accompanying cholecystitis. This differentiation, however, is of more scientific interest than practical value because in either condition surgery is indicated if the symptoms are sufficiently characteristic.

The author recognized spasmodic contraction of the "cap" and pylorus caused by lesions at other points in the abdomen, particularly those at or near the cæcum (kinks in the ileum, appendicitis, mobile cæcum, etc.), and stated that care should be exercised to avoid mistaking these spasmodic contractions for organic lesions. Sometimes a confirmatory series of röntgenograms after the administration of belladonna is necessary to differentiate between spasmodic and organic lesions of the "cap" or pylorus.

In conclusion Cole stated that by studying individually and collectively a large series of röntgenograms and matching them over each other, one can make a diagnosis of early carcinoma of the pars pylorica, indurated ulcer of the stomach, and duodenal ulcer with a degree of certainty equal to that with which one recognizes renal calculi by röntgenograms.

The discussion centered around the expense necessitated by serial röntgenography and the relative value of röntgenoscopy and serial röntgenography. The way in which serial röntgenography can be employed among the masses is the same in which surgery is employed, each patient paying according to his means.

The consensus of opinion was that use should be made of both; that where a positive diagnosis (usually of extensive lesion) can be made by röntgenoscopy, serial röntgenography is unnecessary; but that in all doubtful cases serial röntgenography is absolutely essential before one is justified in making a negative diagnosis of gastric or duodenal ulcer or carcinoma.

Pirie, A. H.: Indications Afforded by X-Rays for and against Operations in Diseases of the Stomach and the Results of Such Operations.
Tr. Am. Röntg. Ray. Soc., Boston, 1913, Oct.

By Surg., Gynec. & Obst.

The author gave his experience of cases in which a diagnosis had been established or confirmed by röntgen rays in diseases of the stomach, and cited the results obtained by surgical and medical treatment. He reviewed the following subjects:

1. Chronic gastric ulcer. Slides were shown illustrating the ulcer filled with barium sulphite and with the bubble of gas above the ulcer. Two slides showed the ulcer filled with barium when the rest of the stomach had been emptied. Pirie advocated shutting off the ulcer by tying a band of fascia tightly around the stomach above the ulcer and anastomosing the jejunum to the lowest part of the cardiac end of the stomach.

2. Acute gastric ulcer, indicated by spasm opposite the ulcer and gastric stasis. Operation was not resorted to in such cases.

3. Early carcinoma. The author described cases in which carcinoma had not been suspected on clinical grounds but unremovable carcinomas were found by röntgenograms.

4. Late carcinoma, shown by X-rays to be irremovable.

5. Cardiac stenosis, mistaken for pyloric stenosis prior to X-ray examination.

6. Pyloric stenosis, when due to duodenal ulcer, does not show finger-like indentations such as are present when it is due to carcinoma.

7. Gastropotosis. The patient's symptoms were not relieved by operation and elevation of the stomach. The author advocated gastro-enterostomy, as in all cases in which the food escaped quickly from the stomach he found that the stomach was small and high.

8. Tumors pressing upon the stomach. Slides were shown of distortions of the stomach by pancreatic cyst and enlarged spleen.

9. Adhesions about the stomach and pressure by gas surrounding organs.

10. Normal stomachs, pronounced normal by X-ray examination and found so at operation.

Pirie believes that the röntgenologist should advise the patient not only for or against operation but also in regard to diet and times for eating.

Henle, A.: Experiences in the Surgical Treatment of Benign Affections of the Stomach and Duodenum (Erfahrungen bei chirurgischer Behandlung gutartiger Affektionen des Magens und Duodenums). *Verhandl. d. Gesellsch. deutscher Naturf. u. Ärzte*, 1913, ii, 144.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Two cases of tuberculous duodenal stenosis were healed by gastro-enterostomy with Kelling's closure of the pylorus. In both cases the röntgen examination failed inasmuch as it showed in the one case only a pyloric stenosis and in the other a pyloric and a high-grade duodenal stenosis. In ten cases of typical ulcers of the duodenum, pyloric exclusion with separation of the stomach was performed with eight cures. In two cases, ulcer symptoms, i. e., hæmorrhages, reappeared after the operation. In the one these were transitory; in the other a second laparotomy had to be performed five and a half years later. A kink and stenosis of the small intestine by adhesions were found 25 cm. below the gastro-enterostomy, and an ulcer in the latter, which required resection and a new gastro-enterostomy. Exitus. The post-mortem examination showed complete cicatrization of the old ulcer and an atrophy of the various typical gastric glands in the excluded portion of the stomach removed by the resection.

In pyloric exclusion the stomach may be severed in the prepyloric part. In this region the operation can be performed much more easily and without fear that the isolated portion of the stomach will continue to produce hydrochloric acid which would keep the duodenal ulcer open. Possibly recurrences observed soon after operation are due to a temporary continuation of the hydrochloric acid secretion.

Henle has occasionally attempted exclusion also in painful ulcers of the pylorus. This he has done in twenty-four cases, in which there were only four deaths. Two of the deaths, however, were not ascribable to the operation. Simple gastro-enterostomy he has performed in benign gastric affections fifty times with only three deaths. Among these were five gastro-duodenostomies, which Henle would prefer if they were not so difficult to perform through a median incision. In all but two cases a posterior retrocolic gastro-enterostomy was performed. In only two cases this led to the development of a peptic ulcer. Peptic ulcer occurred also in one of the two cases of anterior gastro-enterostomy and required repeated operations for a cure. The author has never attempted a transverse resection in benign gastric affections, but has made wedge-shaped resections and typical pyloric resections in five cases each. Two of the former patients died and all of the latter were cured.

The author concludes that in gastric diseases that are undoubtedly benign the operations should be those that give the most favorable prognosis.

In the discussion following Henle's paper, Schmieden stated that simple ligation with additional sutures over the pylorus lead again later to permeability; that the radiological diagnosis of duodenal ulcer is difficult; and that peptic ulcer occurs almost exclusively in anterior gastro-enterostomy. In hour-glass stomach a transverse resection is indicated. In solitary ulcers far from the pylorus a simple gastro-enterostomy is insufficient. Roepke recommended in pyloric exclusion, the separation of the stomach rather far proximally. He prefers a transverse rather than a partial resection. In post-operative hæmorrhage he has employed successfully the injection of 20 ccm. of diphtheria serum with the addition of one injection of secacornin. Dreesmann has determined experimentally that a thread tightly knotted around the pylorus gives a permanent closure. Excised ulcers of the lesser curvature he sutures in a longitudinal direction, thereby avoiding a kinking of the stomach.

BRENTANO.

Einhorn, M.: Indications for Duodenal Alimentation (Indikationen für die Duodenalernährungs-methode). *Deutsche med. Wchnschr.*, 1913, xxxix, 1404. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

By duodenal feeding is understood the nutrition of a patient while the stomach remains empty. This is made possible by introducing into the stomach a small rubber tube, which then enters the duodenum. In a normal person it requires from two to three hours for the beginning of the sound to reach the duodenum. In patients with pylorospasm a longer time is necessary. Thirty-six hours is the longest time observed by Einhorn. Nourishment is given every two hours (8 times a day) and consists chiefly of milk, eggs, and one teaspoonful of lactose. One to two teaspoonsful of butter may be added to every second meal.

The author at first used an irrigator to inject the nutritive fluid, but now uses a syringe with a triple stopcock. As a test to determine whether the sound has reached the duodenum, the fluid is sucked up out of the sound. If the fluid comes from the stomach it is acid, if from the duodenum it is alkaline. A colored fluid may be given by mouth to find out if it can be aspirated through the sound. The nutritive fluid should always be at body temperature. As the sound must remain in place a long time, it is important to clean it after every feeding with water and air to prevent obstruction. In addition to the food, Einhorn introduces about one liter of physiological salt solution daily.

In the last three and a half years the author has used duodenal alimentation in eighty-four patients, in each on an average of from ten to fifteen days. The indications for this method of treatment are: (1) Ulceration of the stomach and duodenum; (2) gastric dilatation without organic obstruction, marked atony with and without pylorospasm; (3) nervous vomiting and the vomiting of pregnancy; (4) diseases of the liver, to limit the blood supply to the

portal vein; and (5) inoperable carcinoma of the stomach and cardia without stenosis. KOLB.

Paterson, H. J.: The Physiology of Gastro-Jejunostomy. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

The prevailing view is that gastro-jejunostomy is a drainage operation. Paterson gives reasons why it should be regarded as a physiological operation.

Bile and pancreatic juice are present in the stomach almost invariably after gastro-jejunostomy.

The evidence of this is, that there is an almost constant increase in the mineral chlorides of the gastric contents after gastro-jejunostomy (99 per cent of the author's cases).

This occurs although there is, as a rule (75 per cent of the author's cases), a diminution of the total chlorides.

After undoing a gastro-jejunostomy this increase in the mineral chlorides disappears again.

Illustrative case No. 1, gastric analysis.

Before gastro-jejunostomy.

Total chlorides.....	0.420
Free HCl.....	0.051
Protein HCl.....	0.289
Mineral chlorides.....	0.080

After gastro-jejunostomy.

Total chlorides.....	0.365
Free HCl.....	0.000
Protein HCl.....	0.153
Mineral chlorides.....	0.211

After the gastro-jejunostomy was undone.

Total chlorides.....	0.343
Free HCl.....	0.018
Protein HCl.....	0.270
Mineral chlorides.....	0.055

If an entero-anastomosis is performed as well as gastro-jejunostomy, this increase in the mineral chlorides is not observed.

Illustrative case No. 2, gastric analysis.

Before gastro-jejunostomy.

Total chlorides.....	0.335
Free HCl.....	0.003
Protein HCl.....	0.175
Mineral chlorides.....	0.156

After gastro-jejunostomy and entero-anastomosis.

Total chlorides.....	0.350
Free HCl.....	0.000
Protein HCl.....	0.226
Mineral chlorides.....	0.124

This increase in the mineral chlorides does not occur as a rule after other operations, *e. g.*, after appendectomy. Therefore the inference is that it is due to the entrance of bile and pancreatic juice into the stomach through the anastomotic opening.

The average increase in the mineral chlorides in the author's cases is 0.077 per cent.

Bile and pancreatic juice contain about 0.4 per cent of sodium chloride; therefore, after gastro-jejunostomy the gastric contents contain less than 10 per cent of bile and pancreatic juice, the amount of bile being less than 5 per cent.

Effect of gastro-jejunostomy on gastric secretion: The total acidity is lowered, the average diminution being 30 per cent. This is due partly to neutralisation by bile and pancreatic juice and partly to diminished secretion.

Effect of gastro-jejunostomy on the motility of the stomach: In the absence of pyloric stenosis, gastro-jejunostomy slightly hastens evacuation of the stomach, but the acceleration is not sufficient to account for the beneficial effects of the operation. This is against the view that gastro-jejunostomy is a drainage operation.

Effect of gastro-jejunostomy on gastric digestion: Gastric digestion is impaired but not lost after gastro-jejunostomy. The impairment seems to be due to loss of free hydrochloric acid.

A report is given of observations made upon patients that were placed upon Schmidt's diet after gastro-jejunostomy, and of observations obtained with the red carmine fibrin test.

Effect of gastro-jejunostomy on metabolism of human body: Gastro-jejunostomy has no material effect on the metabolism of the human body. The investigations of Harley and Goodbody on the metabolism of healthy individuals gave the following results:

	Per Cent of Intake
Highest absorption of nitrogen.....	97.0
Lowest absorption of nitrogen.....	90.1
Average (75 cases).....	93.46
Highest absorption of fat.....	98.5
Lowest absorption of fat.....	90.1
Average (79 cases).....	95.05

In twelve patients on whom gastro-jejunostomy had been performed, the author found that in every instance the amounts of nitrogen and fat absorbed were within these limits.

Conclusions:

1. A certain amount (less than 10 per cent) of bile and pancreatic juice enters the stomach after gastro-jejunostomy.

2. The total acidity of the gastric contents is diminished, on an average, by 30 per cent. This is due partly to neutralisation of free hydrochloric acid by bile and pancreatic juice, and partly to earlier stimulation of the pancreatic secretion and compensatory earlier lessening of the gastric secretion.

3. Gastric digestion is impaired, but not lost, after gastro-jejunostomy.

4. The motility of the stomach, if there be no pyloric stenosis, is for practical purposes unaffected by gastro-jejunostomy.

5. Gastro-jejunostomy has no material effect on the absorption of nitrogen and fat. This chemico-pathological evidence is supported by the evidence of clinical experience.

The author concludes that gastro-jejunostomy is a physiological, and not a mechanical operation. Probably the most important result of this operation is that bile and pancreatic juice in small quantity gain entrance to the stomach.

Practical lessons:

1. Occlusion of the pylorus is an unnecessary complication of gastro-jejunostomy.

2. Excision of simple ulcers is unnecessary if gastro-jejunostomy be a physiological operation.

The view that malignant degeneration of gastric ulcers is frequent after gastro-jejunostomy, is contrary to clinical experience.

Eastman, J. R.: Foetal Peritoneal Folds and Their Relation to Postnatal Chronic and Acute Occlusions of the Large and Small Intestine.
J. Am. M. Ass., 1913, lxi, 635.

By Surg., Gynec. & Obst.

The author describes several peritoneal foetal folds of fairly constant form and distribution and shows their latent possibilities in regard to occlusions of the large and small intestine.

The position and attachments of certain of these folds suggest that they may be causative factors in gravitations and angulations of the terminal ileum. The genito-mesenteric fold of Reid, which passes from the mesentery of the terminal ileum down into the pelvis to the genital gland, for example, bears an interesting resemblance to the ileopelvic band in the adult which Lane believes is one of the chief causes of a downward kink in the ileum.

As Reid's fold is continuous above with the duodenorenal ligament, it is possible that, by contracting, it may cause an upward kinking of the terminal ileum. This may be true also of the rather constant ileocolic folds and the so-called root folds.

The author found Reid's fold in fourteen of thirty-two foetuses and also in the adult. He suggests that Lane's ileopelvic band and Reid's fold are identical and that it may have been formed by the dragging down of the dorsal peritoneum in the descent of the right ovary or testis.

In regard to the bloodless fold of Treves, Eastman states that there is considerable evidence to show that this fold begins as an adhesion between the cæcal head and the mural peritoneum, and that at the time of cæcal torsion the serosa of the peritoneum of the lateral abdominal wall is drawn over the caput to form a pocket-like fossa containing the caput and the appendix. The pericolic fold is formed by a similar fusion and torsion at a higher level of the ascending colon.

Another rather common fold that may bind down the cæcum and the appendix is described as being of a skirt-like form. It passes from the terminal ileum above, downwards around the basal half of the appendix, and then upwards to inblend with the serosa of the caput.

The adhesions of the colon to the peritoneum of its own mesentery also are believed to be persistent foetal adhesions.

The article is closed with the report of the author's case in which an extensive formation of pericæcal membrane led to an acute and complete obstruction of the ascending colon. The division of the membrane resulted in recovery. PHILLIPS M. CHASE.

Summers, J. E.: Surgical Aspects of Intestinal Stasis from an Anatomic Point of View. *J. Am. M. Ass.*, 1913, lxi, 639.

By Surg., Gynec. & Obst.

The author concludes from his experience, that the membranes of the pericolic type of Jackson may be found in every abdomen either on the right side or in the lower left quadrant; that the symptoms, as a rule, are produced in adults, and appear usually after the fiftieth year of age; and that as up to the time of the beginning of the symptoms, there is never any sign of anything wrong that can be attributed to the membranes, the latter should be regarded, on the whole, as purposive and not offensive. He further states that while these membranes may become offensive early, they should be considered as congenital defects the same as a cleft palate or extra toes. They may also become restrictive instead of conservative, owing to continued abuse of the cæcum and colon with resulting loss of tone. When subsequent symptoms cannot be relieved by treatment, the case should become surgical.

The operation of Monprofit and its recommendation are discussed, with reference to eight cases operated upon by the author. Summers recommends also in the ptoses of the transverse colon the technique of Coffey.

He advises releasing these congenital membranes when they are restrictive. As a rule this should be done at their loosest line of attachment. In other cases that require greater mobility of the colon, however, it should be done at the line of attachment of the pericolic membrane and parietal peritoneum which invariably appears as a white line when tension is made on the viscus in the direction of the fibres and blood vessels.

PHILLIPS M. CHASE.

Tichomiroff, I. A.: Inflammatory Diverticula of the Appendix (Zur Frage der entzündlichen Divertikel des Wurmfortsatzes). *Vrach. Gaz.*, 1913, xx, 613. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports cases in which, during appendectomy, there were found typical diverticula of the appendix, formed from the mucous membrane that bulged through a defect in the muscularis. In one case the site of the perforation of the diverticulum could be demonstrated; in the other the mucosa was markedly atrophic and thin. The wall of the appendix showed very marked inflammatory changes. In both cases an increased intra-appendicular pressure was indicated; in one case the lumen instead of being slit-like was plainly dilated and the whole mucosa was thinned; in another case there was extensive atrophy of the mucosa. After a searching examination of the literature and on the basis of his own observations the author assumes that the diverticula in the given cases developed from an inflammatory basis as the result of a circumscribed lesion of the muscular wall and additional increased pressure in the appendix. He regards diverticula as of considerable clinical significance because there can readily be retained in them mucus and bacteria

which may cause a recurrent acute inflammatory process, and further, because diverticula tend to perforation. Finally, the author points out the fact that pseudomyxoma of the peritoneum may be caused not only by rupture of ovarian cysts, as formerly supposed, but also by rupture of cysts and diverticula of the appendix.

VON HOLST.

Körte, W.: The Operative Treatment of Malignant Diseases of the Large Intestine, Excluding the Rectum (Die operative Behandlung der malignen Dickdarmgeschwülste, ausschliesslich des Rectums). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The author based his paper upon his own material, 254 cases in all, and the reports that have been published in the literature since 1900.

The mortality of the radical operation is still quite considerable, amounting to 757 cases in the literature, or 32.2 per cent. The 83 radical operations performed by Körte since 1900 yielded a mortality of 28.9 per cent. The mortality figures of the last decade show somewhat better results.

The particular dangers arise from collapse and peritonitis, and at times are caused by the peculiar anatomical conditions of the large intestine and the difficulties that arise from the intestinal contents.

Acute occlusion of the intestine is a very frequent complication of tumor of the large intestine, occurring in about 38 per cent of the cases. In this condition the attempt must first be made to evacuate the intestine (cæcostomy or colostomy). The radical operation should be secondary (a several-stage operation).

Given sufficient evacuation of the bowels, good blood supply of the extremities of the intestine, and the possibility of approximating them without stretching them, reposition and suture in one stage is the best procedure.

The various anatomical conditions of the different parts of the large intestine demand correspondingly different methods of operation. The prognosis for permanent cure in cases of carcinoma of the large intestine is relatively favorable. Körte reports cures lasting from three years to twenty-one years in 27.7 per cent of the cases of radical operations, or in 39 per cent of the survivors.

Of the palliative operations, antero-anastomosis is the best method in the absence of intestinal occlusion. Cæcostomy or colostomy is the first method for cases of intestinal obstruction. Radical operations (colectomy or entero-anastomosis) must be secondary and should be performed only after the intestine has been evacuated.

Case, J. T.: X-Ray Observations on Colonic Peristalsis and Antiperistalsis with Special Reference to the Ileocolic Valve. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The author bases his study on the examination of 1500 cases following the ingestion of a bismuth meal.

Antiperistalsis was observed in thirty-seven. In most instances, anti-peristaltic waves originate in the transverse colon near the hepatic flexure, proceed toward the cæcum, and disappear usually at a point that corresponds approximately to the ileocolic junction. Antiperistalsis has been seen also in the descending colon, especially in cases of chronic and acute obstruction of the bowel.

The author's observations have convinced him of the presence of a tonic contraction ring in the right half of the transverse colon, as claimed by Cannon on the basis of results obtained in experiments on animals. The exact location of this tonic ring varies with the tonicity of the proximal colon, but it is usually at a point near the middle of the right half of the transverse colon.

The writer again calls attention to a phenomenon that has been previously described by him as a sign of serious bowel obstruction, viz., *exaggerated antiperistalsis*. He has noted exaggerated antiperistalsis in every case of carcinoma of the colon that he has studied. In such instances it occurred in all parts of the colon. It has been recognized besides in spastic constipation and benign obstructions of the bowel. Also, in every case studied by the author in which ileosigmoidostomy had been performed, retrograde peristalsis was observed in the left half of the colon after the operation.

Case studied also mass peristalsis waves. These were first described by Holzknecht who reported two observations. During the last sixteen months the author has noted movements of this type in thirty-seven patients. The bowel contents suddenly lost their haustral markings and were formed into an ovoid, sausage-shaped mass which had perfectly smooth edges and was rounded at the ends. This mass traveled slowly at about twice the rate of the peristaltic waves in the stomach. The distance traversed varied from three or four inches to several feet. After coming to rest, the mass regained its haustral markings. The time for their reappearance depended upon the consistency of the bowel contents, being brief if the contents were semi-fluid and longer if they were of a firmer consistency.

The effects of massage, mechanical vibration, and electrical stimulation on the peristalsis of the colon were also studied in a number of cases. The immediate effects observed were a deepening of the haustral contractions and sometimes the appearance of antiperistaltic waves. The author concludes that the well-recognized favorable influence of massage and mechanical vibration upon the motility of the bowel must be produced indirectly by increasing the tone of the bowel muscle rather than by any actual mechanical pressure of the bowel contents onward. In order to produce any true electrical stimulation of the bowel wall, a bipolar electrode must be employed.

Special attention was given to the study of the function of the ileocolic valve on the theory that our present knowledge of the antiperistaltic function of the colon demands all the more a recognition of the

normal competency of the ileocolic valve. In the 1500 cases above referred to, incompetency of the ileocolic valve was noted in nearly 250 instances, or once in six. Such a large proportion of incompetent ileocolic valves is explained by the fact that the 1500 cases were gastro-intestinal cases submitted for bismuth-meal study.

The author states that the old idea that insufficiency of the ileocolic valve causes diarrhoea is erroneous. In most cases of insufficiency of the valve the opposite condition, i. e., constipation, prevailed. The fact that ileal stasis and constipation rather than hypermotility is noted when reflux from the colon into the ileum is no longer prevented by a competent ileocolic valve, is explained by our knowledge of antiperistaltic phenomena in the colon.

While it is generally recognized that rectal alimentionation is, on the whole, unsatisfactory, there are enough cases in which it has been successful to warrant the continuance of it.

Körbl, H.: Continence of the Bowel after Radical Operation for Carcinoma of the Rectum (Die Kontinenzverhältnisse nach den radikalen Operationen des Mastdarmkrebses). *Arch. f. klin. Chir.*, 1913, ci, 449. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Körbl discusses continence of the bowel on the basis of data collected in two hundred and four cases of extirpation of the rectum in von Eiselsberg's clinic. He divides these cases as follows:

I. Cases in which the sphincter was sacrificed. *a.* In one a plastic operation according to Schoemaker was attempted to form a new sphincter. The result seemed good at first, but at the end of two years there was incontinence for liquid stools. *b.* Anus sacralis according to Hochenegg; i. e., a deflection of the bowel to the right and fixation beneath the resected sacrum. Only after six months, and usually after a longer period, did sensation slowly return, and its improvement consumed an equal period of time. With the increasing sensibility the patient could tell when there was to be a movement. At the same time an ampulla usually developed. Among the thirty cases in which the late results were studied there were eight in which sensibility had been lost permanently. These were, almost without exception, cases in which, as the result of gangrene, there had occurred a retraction of the oral end of the gut followed by a healing by granulation tissue. These patients did not have premonition and therefore suffered incontinence. In sixteen cases sensibility was restored and there was no incontinence for formed stools. On a well-regulated diet about one half of these patients were quite comfortable. *c.* Anus sacralis according to Gersuny with late results in seventeen cases. Until the end of a year the spiral formation could be easily felt, and although only slight sensibility had returned, premonition was present and there was no incontinence for formed stools. After two to three years the spiral formation was present only in a few cases. In the others, circular folds and ampullæ had taken its place. Sensi-

bility was finally restored in all cases and there was premonition for movements. Of ten cases examined after a period of three years only one showed the spiral formation, with no incontinence to speak of, even of liquid fæces. Seven had well-developed folds and ampullæ. Sensibility and premonition were fully restored for formed stools. For the restoration of these two functions Gersuny's operation is preferable to Hochenegg's as the peristalsis of the large bowel is felt more intensely. The twisting according to Gersuny, therefore, has an advantage over the single anus formation.

II. Cases in which the sphincter was spared. Except for a few intrarectal excisions and operations by the invagination method, the procedures employed were as follows: *a.* The method of excision after Hochenegg was used in two cases. The results were not very good. There was a high mortality from infection. Good functional results were obtained in thirty-six per cent of the cases. Hochenegg's method favors the occurrence of gangrene. The danger can be minimized by incising the sphincter longitudinally according to the method of Heinecke, but this procedure interferes with the functional result. The author claims that this method is indicated only when the operation must be performed speedily and when only the anal mucous membrane can be spared. *b.* Circular suture, primary or secondary, was employed in thirty-four cases, with a lower mortality and no incontinence in sixty-six per cent of the cases. The author considers this the method of choice in resection of the rectum. The posterior line of suture may be supported by a plastic skin flap after Rotter. To lessen the number of poor results the method should be used only primarily under absolutely favorable conditions. Otherwise the suture of the anterior part of the circumference should be completed and the posterior part fixed to the skin to produce a favorable condition for secondary suture. *c.* Sigmoidoprostomy after Hochenegg and Eiselsberg (Krogus) was performed as an emergency operation in three cases. This the author considers the method of choice when a long loop of sigmoid can be drawn down easily. *d.* Combined operation was performed in sixteen cases with thirty-seven per cent mortality.

The objection that the more radical procedures interfere too much with voluntary control to be performed extensively the author refutes on the basis of the end-results in his own cases and of those collected from the literature.

HELLER.

Lenk, R., and Eisler, F.: Experimental Radiological Studies on the Physiology and Pathology of the Alimentary Tract (Experimentelle-radiologische Studien zur Physiologie und Pathologie des Verdauungstraktes). *München. med. Wchnschr.* 1913, lx, 1031.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors report the results of experiments carried out on animals for the radiological study of

the stomach. In contrast to their observations on the normal stomach they found that in hypacidity the peristalsis is stronger and the emptying of the stomach is more rapid; in hyperacidity, on the other hand, there was no deviation from the normal (which fact contradicts the prevailing belief). Motor disturbances in gastric diseases, therefore, have no apparent connection with the chemism of the stomach. This view is confirmed also by comparative observations on human beings. BODE.

Carman, R. D.: The Technique of Röntgen-Ray Examination of the Gastro-Intestinal Tract, and the Interpretation of Screen and Plate Findings. *J. Am. M. Ass.*, 1913, lxi, 321.

By Surg., Gynec. & Obst.

The technique of bismuth X-ray work on the stomach and colon used by the author at the Mayo clinic is described in some detail. Both fluoroscopic and plate methods are used. No marked preference is given to either one as the information obtained by each is somewhat different in character. These methods, therefore, are not in competition and both are used in routine in every case. Most of the data, however, is obtained during the screen examination, two or more subsequent plates acting as a check-up for confirming or amplifying the data previously obtained. Haudek's double meal is given.

The mixtures used for ingestion and injection, and the purpose of each, the general outlay of instruments and the method of using them, and the manner of recording observations are all described.

Printed forms are used for all records which contain in classified form all conditions commonly seen as well as spaces for unusual data and conclusions. The recapitulation sheets contain the diagnostic points boiled down. In this way complete permanent data can be preserved for future reference and comparison.

Points of diagnostic significance are sifted out and the combination may be strong enough and characteristic enough to point to a single diagnosis. Experience in radiology is gradually formulating X-ray "sign complexes" which are analogous to the symptom complexes in ordinary clinical use. The X-ray findings in a given case are diagnostic of one or another lesion in proportion to their coincidence with the known sign complex of that lesion. In one case the X-ray results alone may be diagnostic, while in another, abnormal X-ray findings may be quite lacking.

In arriving at a diagnosis, therefore, it is necessary to consider X-ray findings as supplemental and contributory to other methods.

Quoting from the author: "Visualization of a cancer of the stomach with obvious filling defects, or a gastric ulcer with a characteristic incisura or a niche is so dramatic that the exuberant enthusiasm thus aroused has unfortunately created the impression in some quarters that the Röntgen-ray is ready to supersede the ordinary clinical methods of diagnosis. This impression should be discouraged,

for in the vast majority of instances the ray is only a link in the chain. The X-ray is not a rival of clinical methods, but a most valuable adjunct thereto, and worthy of routine employment."

HOLLIS E. POTTER.

LIVER, PANCREAS, AND SPLEEN

Parlavecchio, G.: A Rare Case of Hydatid Cyst of the Pancreas Cured by Marsupialization (Un cas rarissime d'hydatyde du pancréas guéri par la marsupialisation). *Pensiero méd.*, 1913, No. 25.

By Journal de Chirurgie.

Echinococcus cysts of the pancreas are very rare. Hanser, in 1912, could find only twenty-eight cases in the literature, even counting the doubtful ones. Only eight of these were operated on. All were cured. In one case the pericystium was extirpated; in another Bobroff's method was used; i. e., incision, extraction of the parasitic cyst, injection of an indifferent fluid into the pericystium, and suture; in three cases resection of the pericystium, and in five others marsupialization.

The author's patient was a woman twenty-five years of age. For eighteen months she had experienced a sense of heaviness and tension in the epigastric region; her appetite was poor; she was constipated, but had neither vomiting, icterus, diarrhoea or melæna. She grew thin, and at the end of eight months had an epigastric tumor as large as an orange, which was diagnosed as cyst of the mesentery.

On examination there was found a prominence in the supra-umbilical region, a little to the left side. This was moved slightly by respiration. Palpation showed a hard, elastic, spherical tumor on the posterior wall of the abdomen, which could be moved slightly both vertically and horizontally. Percussion showed the stomach above it and intestinal tympany below and on the sides. There were no ascites or other objective signs. A diagnosis was made of cystic tumor situated between the two folds of the transverse mesocolon.

On laparotomy a tumor was found between the stomach and transverse colon, behind the gastrocolic omentum. As it was very adherent on all sides, the idea of extirpating it was given up. It was fixed to the abdominal wall by a run of sutures and opened in the center. About a quart of fluid and daughter vesicles came out. The body of the cyst was firmly implanted on the tail of the pancreas. Complete recovery resulted and was found to be permanent after nine years.

AMEVILLE.

Norrlin, L.: Subcutaneous Traumatic Rupture of the Spleen and Its Treatment (Über subcutane, traumatische Milzrupturen und ihre Behandlung). *Upsala Läkaref. Förh.*, N. F., 1913, xviii, 214. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Among 33,000 patients received in the surgical section of the Sahlgren Hospital in Gotenburg from 1891 to 1912, there were 36 cases of subcutaneous

injury of the abdominal viscera, 5 of which were injuries of the spleen. During the same period of time there were 8,700 cases of injury treated at this hospital. Injuries to the spleen, therefore, occurred only once in 1,740 cases of accidental injury and once in every 9 cases of rupture of the abdominal organs.

In four other Swedish hospitals the author has discovered eight additional unpublished cases of rupture of the spleen, making in all thirteen cases. Eleven of these were males. The youngest patient was seven years of age and the oldest sixty-seven. Most of them, however, were children about ten years old and men from twenty to forty years.

One patient who had a fixed and enlarged spleen ruptured it during an epileptic fit and died within fifteen minutes. All of the others had been subjected to severe violence, generally upon the left side. In no case was there a history of typhoid or malaria. In four cases the condition of the spleen was pathological; in three it was moderately enlarged (once being complicated by Laënnec's cirrhosis of the liver) and in one it weighed 1200 grams (Banti's disease?). In three cases, besides rupture of the capsule and medulla, there was subcapsular hæmorrhage; in six, single or multiple partial rupture of the capsule and medulla, and in four the spleen was completely, or almost completely, broken into two or more pieces. In four cases the rupture was uncomplicated; once it was complicated by rupture of the liver and the ventricles; once by rupture of the small and large intestines; once by rupture of the diaphragm; once by rupture of the splenic vein; once by rupture of the lung and fracture of the ribs, and four times by fracture of the ribs alone.

The author believes that complicating rib fracture is probably much more frequent than is shown by these and other statistics. Pain in the left scapula or shoulder was not noticed in any case. As a rule there were no outward signs of injury. Three patients died immediately after the injury. One of the ten operated upon died. In this case there was also rupture of the liver. The remaining nine recovered after an average time of thirty-two days. The ribs were not resected in any of the cases. Incisions were made as follows: once a simple horizontal incision under the left costal margin, once a median incision, once a vertical incision through the middle part of the sheath of the right rectus, once a similar incision on the left side, and five times a T incision. Tamponing was successful in two cases and failed in one. In another case where the tampon was used the hæmorrhage continued, and the next day it was necessary to perform a splenectomy. Partial splenectomy was performed twice with good results, one third to one half of the spleen being removed. Total splenectomy was performed in five cases. On examination two to nine months after the operation no evidence of any bad effect was found. In agreement with Stinelli, the author advises an attempt at conservative treatment by compressing the vessels of the hilus.

Norrin sums up his conclusions as follows:

The number of cases of rupture of the spleen brought to the hospitals in time for operation seems to be increasing. Therefore every surgeon should familiarize himself with the symptoms and treatment of this condition. There are no pathognomonic symptoms but it is possible to make a probable diagnosis. The preferred incision is an exploratory incision from which a transverse incision is made through the left rectus muscle. The spleen should be preserved if possible. Future surgical progress should be in the direction of developing conservative methods.

GIERTZ.

Biach, P., and Weltmann, O.: The Inhibitory Influence of the Spleen upon the Growth of Rat Sarcomata (Über den wachstumshemmenden Einfluss der Milz auf das Rattensarkom). *Wien. klin. Wchnschr.*, 1913, xxvi, 1115.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Whenever the authors inoculated sarcomatous tissue mixed with splenic tissue they observed an inhibitory influence exerted by the splenic tissue upon the development of the tumors. The spleens of sarcomatous rats exerted a more powerful inhibitory action than those of healthy animals. The immunity developing in the body following the absorption of the tumor cells is considerably increased by the injection of ground-up splenic tissue. The animals that remained refractive following the injection of splenic and tumor tissue did not develop any tumors following a second inoculation. It is impossible to state what the action of the spleen is in all of these processes. The splenic tissue may increase the natural protective substances of the body or it may exert a destructive influence upon the tumor cells by means of ferments. The injection of the splenic tissue in the rat undoubtedly produces a general reaction of some sort which must be interpreted as increasing the immunizing processes resulting from the growth of the tumor cells.

CARL LEWIN.

MISCELLANEOUS

Polenoff, A., and Ladygin, M.: The Hæmostatic Action of Fatty Tissue in Injuries of Parenchymatous Organs of the Abdomen (Die blutstillende Wirkung des Fettgewebes bei Verletzungen parenchymatöser Organe der Bauchhöhle). *Vratch. Gaz.*, St. Petersburg, 1913, xx, 737.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Former experiments conducted at the clinic of Oppel and Federoff showed that the hæmostatic action of transplanted tissue depends upon the presence of thrombokinase, and that therefore tissues that are rich in blood vessels and contain much thrombokinase are the best adapted for transplantation. The authors next conducted experiments to determine the hæmostatic action of transplanted fatty tissue. For this purpose injuries were inflicted upon the spleen, kidneys, and liver of rabbits and the wounds sutured over with fatty tissue

or tamponed with fatty tissue. In all cases the bleeding ceased within three to five minutes. All of the animals withstood the operations well. The authors tested the method also on three human patients. One case was a severe subcutaneous rupture of the left kidney with severe hæmorrhage which could not be controlled with the usual methods. A piece of the perirenal fat was therefore transplanted and the hæmorrhage ceased immediately. The patient was discharged cured within two weeks. The other two cases were severe stab wounds of the liver and lung. In both, a piece of subcutaneous fat was transplanted and the hæmorrhages ceased within a short time.

The experiments revealed the fact that fatty tissue has as good a hæmostatic action as other tissues although it contains only a small amount of blood and consequently only a little thrombokinase. It is doubtful, therefore, whether thrombokinase is really the principal factor in the hæmostatic action of transplanted tissue. At the present time the authors are determining the quantity of thrombokinase that is contained in fatty tissue.

VON HOLST.

Fowler, R. S.: The Elevated Head and Trunk Position in the Treatment of Surgical Lesions of the Abdomen. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

This paper is based on the author's observation of over 300 cases of diffuse septic peritonitis and a study of those operated upon by other surgeons.

The explanation of the value of the elevated head and trunk position given by the author is as follows: The peritoneum is an enormous lymph-sac, and inflammation of this membrane is therefore a lymphangitis. The peritoneal absorbents are represented by lymphatics in the structure of the peritoneum. These lymph-channels are large and numerous in the neighborhood of the diaphragm, and have comparatively large openings or stomata; in the intestinal area the lymph-trunks and stomata are less numerous, and in the pelvic area the larger lymph-channels and stomata are absent. In localities where the lymph channels are large, as in the upper abdomen, especially in the diaphragmatic area, absorption occurs before the lymph-channels can be obliterated, and the organism becomes overwhelmed. It follows, then, that if the toxic products can be confined to, or drained into, the lower abdominal or pelvic area, an inflammatory occlusion of the capillary lymphatics will result and absorption will be retarded to a great degree. It is this result that makes the elevated head and trunk positive of value in surgical lesions of the abdomen.

In treating cases of peritoneal involvement, all septic material should first be removed as rapidly and with as little disturbance of the peritoneum as possible. Advantage should be taken of the force of gravity in order to facilitate the passage of fluids from abdominal areas to the pelvis. The latter is accomplished by means of the elevated head and

trunk position and has for its purposes: (1) The lessening of the rapidity of the absorption of septic products by retarding the normal intraperitoneal wave toward the diaphragm. (2) The relief of diaphragmatic pressure and the favoring of normal respiration. (3) The promotion of normal peristalsis, both gastric and intestinal. (4) The localization or prevention of the spread of infective processes in the pelvis.

R. W. MCNEALY.

Carrel, A.: Concerning Visceral Organisms. *J. Exp. Med.*, 1913, xviii, 155.

By Surg., Gynec. & Obst.

Carrel gives an account of his experiments in which he kept animal organs alive and functioning after their removal from the animal body. Abdominal and thoracic viscera removed from cats and

dogs were kept in Ringer's solution at 38 degrees centigrade. The lungs were ventilated artificially. Food and water introduced into the oesophagus were digested. Fæces were excreted from the artificial anus. Urine also was excreted. The heart-beat varied from 120 to 150.

The organisms lived for periods of from three to thirteen and a quarter hours after the death of the animal from which they had been taken. In some instances the death of the organisms occurred rather suddenly. Usually, however, it was preceded by irregularity and weakness of the heart-beat. In some cases the heart-beat was weak after the removal of the organs from the animal body but it became strong immediately after transfusion from another animal of the same species.

JAMES F. CHURCHILL.

SURGERY OF THE EXTREMITIES

DISEASES OF BONES, JOINTS, MUSCLES, ETC. GENERAL CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Frauenthal, H. W.: Syphilitic Bone and Joint Conditions. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

This paper was presented for the purpose of drawing the attention of the orthopedist to the frequency of bone and joint lesions in inherited and acquired syphilis. These must often be regarded as tubercular, rheumatic, etc., for in the reports of orthopedic institutions, few cases are given.

From a review of the literature published in England and America, the author is convinced that syphilitic joint conditions have not received the consideration to which they are entitled. The observations and statistics of the most eminent continental observers show a much larger percentage of cases. Osler, in one of his recent statements, claimed that 50 per cent of the human race die from either direct or indirect effects of syphilitic infection.

According to Fournier, 39 per cent of all cases of congenital syphilis have joint diseases. Von Hippel states that 56 per cent have arthritis, and Schuller claims that 7 per cent of all joint diseases in children are syphilitic.

To arrive at a correct diagnosis by a system of exclusion, the following points in inherited and acquired syphilis should be taken into account in determining bone and joint syphilis:

1. Blood tests: (1) The finding of the spirocheta pallida; (2) the Wassermann test; and (3) the Noguchi test.

2. Night pain in the bones.

3. X-ray findings in bone and joint conditions: (1) Periosteal thickening; (2) a uniform bone shadow that is a unification of compact and cancellous tissue, first reported by the author in 1906; (3) a process appearing, by contrast, as a light area, and

which is a gummatous destruction of the bone; (4) epiphyseal hypertrophy, detachment, etc.; (5) bone tumors; and (6) bone cysts.

4. Epiphysitis: Syphilitic epiphysitis is characteristic of congenital syphilis, as has been described by Barlow, Fournier, Farrott, and Taylor.

5. Lymphadenitis: General lymphadenitis should excite the suspicion of syphilis.

6. Anti-syphilis treatment: A doubtful diagnosis may be confirmed by a course of anti-syphilis treatment.

Attention is drawn to the fact that a syphilitic hydrops of the joint precedes the eruption both in congenital and acquired syphilis and that syphilitic and tuberculous processes often occur simultaneously in the same lesion, a fact that must be remembered in the differential diagnosis.

The author reports 26 cases of syphilitic bone and joint disease in which mistakes had been made in diagnosis or which presented some peculiar syphilitic condition.

Observers have stated that in congenital syphilis about one half of the cases develop arthritis. In doubtful cases the author advises submitting the patient to a Wassermann or Noguchi blood test, but he has found that in some cases in which a negative Wassermann is obtained a small injection of salvarsan or mercury salts in syphilitic cases will give a positive reaction.

It is pointed out that a tubercular discharge from a joint does not exclude the possibility that syphilis may be the main cause of the joint disturbance, and if the syphilis is treated, the tubercular infection may often be cured.

At the Hospital for Deformities and Joint Diseases there was found in 15 per cent of the cases a tubercular invasion on a syphilitic base. A marked improvement was obtained in these cases by the addition of salvarsan and iodide to the other treatment.

Wachsner, F.: Acute Osteomyelitis and Plastic Operations on Bone in Childhood; from the Material of the Emperor and Empress Friedrich Children's Hospital for the years 1890 to 1912 (Über akute Osteomyelitis und Osteoplastik im Kindesalter, bearbeitet an dem gesamten Material des Kaiser- und Kaiserin-Friedrich-Kinderkrankenhauses in der Zeit seines Bestehens vom Jahre 1890-1912). *Arch. f. Kinderh.*, Stuttg. 1913, lx-lxi, Festschr. f. Adolf. Baginsky, 748.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This work is divided into a consideration of osteomyelitis in childhood and a thorough review of Gluck's methods of plastic operation on bone for defects caused by osteomyelitis and similar processes.

The author notes the frequency of streptococcus infection of bones and joints in infancy and the prevalence of mixed infections later. Of the infectious diseases, scarlet fever is the most apt to be followed by osteomyelitis. The infection results from embolus at the points where the bone is particularly rich in blood vessels. Trauma is often a starting point.

The prognosis depends upon the severity of the general symptoms. Prompt limitation of the focus of infection improves the prognosis and lessens the danger of general septicæmia. In children the neighboring joints are frequently involved by metastasis. Suppuration does not always take place, for many beginning inflammations are overcome by the vitality and bactericidal power of the tissues.

The diagnosis is not always easy in early childhood. Violent general symptoms, fever, local pain, doughy swelling around the bone, and efforts to spare the affected limb will be noticed before the röntgen picture shows any changes.

The treatment consists in carefully opening the periosteal abscess. If the general symptoms continue, the bone should be opened without delay. In spite of the early removal of affected bone, more or less extensive necrosis cannot always be prevented. In the 90's Gluck replaced the defect with ivory, and obtained good cosmetic and functional results, as is shown by a great number of röntgen pictures. The results of operations that he performed in 1890 and 1893 have been permanent. The cases in which the whole tibia was replaced by ivory are especially interesting. Even when the permanent replacement of the bone by the ivory was prevented by the formation of fistulæ, however, the ivory served a purpose as a temporary fixation, preventing the sinking-in of the soft tissues of the limb and acting as an irritant to stimulate the formation of new bone.

Pictures are given showing artificial knee-joints and cases of plastic operations with boiled bones, metal rods, and bone from the same individual that grew in very well in spite of previous treatment with bichloride solution.

In conclusion, reports are given of two cases. In one the entire tibia except a small piece of the diaphysis at the upper end was removed. The

astragalus also was resected. The bone was replaced by the shaft of the fibula and an artificial joint formed between it and the calcaneus. A picture taken after fourteen years had elapsed showed a new joint formed between the calcaneus and the fibula which had developed the strength of a normal tibia. In the second case the entire tibia, patella, and astragalus were resected and the tibia replaced by the fibula. After five years not only had the fibula increased decidedly in length and thickness, but new bone had been formed from the fragments of periosteum that remained. SPITZY.

Dachtler, H. W.: Typhoid Periostitis. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.

By Surg., Gynec. & Obst.

Dachtler reported cases of chronic periostitis with new bone formation which were first diagnosed as syphilis on the basis of both clinical findings and röntgenograms.

These cases gave negative Wassermans but the tibial nodes were so suggestive that the patients were placed on anti-syphilitic treatment though without benefit.

The author had examined one patient three years previously when the latter was convalescing from typhoid. At that time he undoubtedly had typhoid periostitis according to both clinical and röntgenographical findings and none of the bone changes were present that were found three years later and from which the diagnoses of syphilis were made. Neither mercury or neo-salvarsan improved the patient's condition and it was finally decided to try the effect of typhoid vaccines.

Two cases were treated, one by Levison and another by Daniells. The pain in the legs and the other symptoms disappeared and symptomatically the patients were cured.

Further röntgenograms recently taken show no marked change in the bone picture and the patients report that there has never been any return of the symptoms previously complained of.

In conclusion, the author states that there may be marked similarity in the bone changes of chronic typhoid periostitis and syphilis and careful attention to the clinical history may be necessary to avoid errors in diagnosis.

Talbot, Dodd, and Peterson: Experimental Scorbutus and the Röntgen-Ray Diagnosis of Scorbutus. *Boston M. & S. J.*, 1913, clxix, 232.

By Surg., Gynec. & Obst.

The white line seen in radiographs at the ends of the diaphysis of the long bones has been considered by previous writers to be constant in, and peculiar to, infantile scurvy. This line which is due to a selective increase in calcium deposit at this point has been seen in advance of the clinical or radiological signs of subperiosteal hæmorrhage and persists for months after an apparent cure.

When scorbutus is associated with rickets, radiographs show, in addition to the white line, a

distinct roughening of the ends of the bone shaft as if it were teased out with a needle. Also in certain cases of syphilis a white line has been noted occasionally but it is by no means constant.

Experiments were conducted by the authors to test the constancy and further explain the pathological condition that results in the white line. Guinea pigs and monkeys were used. Fed with oats or bread and water, the younger guinea pigs succumbed before the arrival of clinical scorbutus. The larger pigs survived about forty days, and although a definite white line could be demonstrated radiographically in one or more cases, the epiphyses were rather too well united to correspond to the stage of development seen in infants. On microscopical examination the white line was found to be the seat of a definite increase in the density of the bone.

In a monkey fed on unsweetened condensed milk death occurred in three months. Though unobserved during life, the characteristic white line at the diaphyseal ends was noted in the radiographs taken post mortem.

These experiments confirm those previously reported in that it was possible to produce scorbutus in the guinea pig and monkey, and the condition was accompanied by the radiographical white line that is seen constantly in infantile scorbutus.

HOLLIS E. POTTER.

Van der Scheer, W. M.: Osteomalacia and Psychosis (Osteomalacie und Psychose). *Arch. f. Psychiatr.*, 1913, 1, 845.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Osteomalacia is often suggested by the clinical symptoms and microscopical appearance of the bones in osteoporosis. The author examined microscopically the glands with an internal secretion having an influence on the metabolism of the bones; i. e., the thyroid gland, the ovaries, the adrenals, and the hypophysis. He considers osteomalacia a chronic inflammatory process which is produced by definite agents, toxins or bacteria, and which requires a special predisposition. This predisposition exists in a disturbed metabolism which may arise from a functional disturbance of certain glands with an internal secretion.

The author's view explains the frequent occurrence of the disease in pregnant and puerperal and strumous women. Patients with chronic insanity are also much more predisposed to this disease than others. This may be due to the fact that the glands of internal secretion play an important rôle in certain forms of chronic psychoses.

RUHEMANN.

Paus, N.: Bone Cysts, Ostitis Fibrosa and Multiple Exostoses (Knochencysten, Ostitis fibrosa und multiple Exostosen). *Norsk Mag. f. Lægevidensk.*, Christiania, 1913, lxxiv, 634.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports a case of bone cyst in the upper half of the humerus of a 17-year-old girl. The cyst

had given no symptoms and was discovered in the röntgenogram taken because the patient sustained a fracture of the upper arm below the surgical neck from a fall. The röntgen picture showed with certainty that it was a cyst and not a sarcoma that was present. The cyst wall was chiseled out anteriorly and the microscopical examination verified the diagnosis. Consolidation occurred in from six to seven weeks. The function of the arm was restored completely. No cysts were demonstrable in other parts of the osseous system.

The author mentions further a case of fibrous osteitis in the uppermost part of the femur in a 31-year-old woman. The röntgen picture showed a considerable swelling on the left side in the trochanter region, which was permeated with hollow spaces. Cavities were seen also in the collum and the caput. The collum formed almost an acute angle with the diaphysis of the femur. The bone in the acetabulum seemed more transparent than normal. The radiogram of the right hip joint showed merely an irregularity in the joint surface of the caput. A case of cartilaginous exostoses is also reported.

NILSEN.

Haas, S. L.: The Regeneration of Bone from Periosteum. *Surg., Gynec. & Obst.*, 1913, xvii, 164.

By Surg., Gynec. & Obst.

In an original experimental work, the author has endeavored to determine the exact role that the periosteum plays in the regeneration of bone. He presents also a short resumé of the literature, and the opinions of the leading investigators along this line.

The author's observations were made in a series of six-two experiments on rabbits, dogs, and cats, which lasted from four to two hundred and forty-nine days. All of the experiments were made upon the ribs, which were treated according to a number of methods. The first experiments showed the normal method of regeneration following a simple subperiosteal resection both when bone elements were left in and when they were entirely removed. In another set of experiments the rib was raised from its periosteal bed and a layer of muscle sewed beneath so as to separate it entirely from the periosteum. Bone always grew in from the angle formed by the raised rib and periosteum.

It cannot be denied that the bone may have had some influence in originating the regenerative process, but it is significant that the regeneration occurred only when the periosteum also was present. Therefore, the author concludes that the periosteum must have acted in some other way than by merely passively directing the distribution of new bone. He ascribes to the periosteum some power, possibly of a chemotactic nature, which determines the direction in which new bone shall grow. In another series of experiments similar to the above but with the addition of blood-clot to the periosteal space, the blood-clot stimulated the periosteum to activity even in the absence of any bone connection.

The author's conclusions are as follows: (1) Periosteum, especially in the presence of blood-clot, has the power to regenerate bone. (2) Regeneration of bone is not dependent solely upon the presence of pre-existing bone. (3) Regeneration of bone was never found unless periosteum was present.

Hartung, A.: Unusual Bone Lesions. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.
By Surg., Gynec. & Obst.

Two groups of cases are considered, in both of which there is a more or less generalized involvement of the bone. In one the bone affection practically constitutes the disease; in the other it is a manifestation of a coincident lesion.

Group 1 includes two cases of osteitis fibrosa of the variety first described by Paget in 1877 and commonly known as osteitis deformans. These presented all the usual findings—insidious onset, progressive bony enlargement and deformity, ape-like posture, etc. The X-ray examination revealed a coincident osteoporosis and sclerosis, the fine cancellous markings being replaced by a coarse trabeculation. The skulls were especially distinctive in that they showed a peculiar mottling.

Case 3 of the first group was an example of osteitis fibrosa cystica first described by Von Recklinghausen in 1891, and commonly known as multiple bone cysts. Repeated X-ray examinations showed a large number of localized decalcified areas with the cortex of the bones much thinned and expanded. Some of these had fractured spontaneously, some produced pain and swelling, and others were wholly unsuspected. The case was under observation for over four years and the patient's general health during this time was unimpaired.

The next group of three cases came under the classification of hypertrophic osteo-arthropathy of Marie. Two of them were associated with pulmonary tuberculosis, and the third with chronic jaundice, due probably to Hanot's cirrhosis. All three had the characteristic bilateral enlargements of the wrists and ankles associated with some pain and tenderness. Some of the other joints were likewise affected. The X-ray examination revealed an absence of joint changes but a marked osteoperiosteitis near the ends of the long bones around the joints involved. This was most marked at the metatarsals and carpals, the ulnæ, the radii, the tibiæ, and the fibulæ.

Ely, L. W.: Diseases of Joints and Bone Marrow. *Am. J. Surg.*, 1913, xxviii, 300.
By Surg., Gynec. & Obst.

Ely divides joint conditions into two types. Type I includes those cases that are characterized by inflammation or proliferation of the synovia; Type II, those cases that are characterized by inflammation and degeneration of the synovia, degeneration of the marrow, and resulting hypertrophy of the bone and cartilage.

As representing Type II the author describes a

simple synovitis in which there is no gross pathology and only the synovia is inflamed. The disease shows no tendency to spread and involves only one, or at most, two joints. This is a true arthritis deformans in which the infectious element is very feeble in its manifestation. In this class the author puts non-traumatic synovitis and intermittent hydrops. He differentiates it from the various other forms of synovitis.

Severe multiarticular group. It is pointed out that this group is essentially multiarticular and progressive, and involves various joints in succession. Pathologically this group is a proliferation of the synovia and in most cases, also of the lymphoid marrow, an atrophy of the bone (either rarifying osteitis, or a resorption of calcium salts), and an erosion and destruction of the cartilage which results in subluxations, distortions, and fibrous and bony ankylosis. The onset and the symptoms vary. There is a tendency toward symmetrical involvement of the joints which is more or less characteristic. The small joints of the extremities are most likely to be the first involved. Still's disease is included in this group.

As representing Type II the author groups osteoarthritis and the hypertrophic form of Goldthwaite. In discussing the etiology he states that patients with this type of arthritis often suffer with flatulence and intestinal indigestion. In many cases repeated trauma is probably a factor.

The author believes that the changes are due to degenerative processes in the bone marrow, the deeper layer of the periosteum, and the synovia. The bone and cartilage become hypertrophied. The resulting atrophy of the articular cartilage is due to the growing in of new cartilage and bone beneath. The latter deprive the articular cartilage of its nutrition which it derives from the marrow. The peripheral cartilage becomes hypertrophied, and, either persisting or becoming changed into bone, causes spurs, exostoses, and deformities. When portions of the proliferated cartilage get loose, they give rise to joint mice.

Ely states that constitutional symptoms are not conspicuous and that pain and restriction of function in the affected joint are the chief causes of complaint. The restriction of motion is due to mechanical interference.
J. O. WALLACE.

Ridlon, J.: The Mechanical Treatment of Hip Disease. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

By "hip disease" is meant any chronic inflammation of the hip joint that is not differentiated from tuberculosis, and which, when left untreated, results in a more or less diminished range of motion at the joint, with usually some deformity and frequently a shortened limb.

All cases of hip disease demand mechanical treatment; only a very small percentage demand operative treatment, and for these, mechanical treatment is as essential as for cases not operated upon.

The mechanical treatment falls into three general classes; i.e., plaster of Paris splints (long and short); metal splints for immobilization (of which the Thomas splint is the best type), and traction devices for use in bed and for walking (the Taylor splint).

Some cases require treatment in bed for a time; some patients may walk with crutches or the protecting traction splint, and others, at least during the period of convalescence, may with advantage walk on the limb without crutches.

FRACTURES AND DISLOCATIONS

Dollinger, B.: *The Reposition of Fractured Bones under Local Anæsthesia* (Über die Reposition der Bruchenden in Lokalanästhesie). *Zentralbl. f. Chir.*, 1913, xl, 763.

By *Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.*

The best treatment for recent simple fractures of the extremities is the accurate reposition of the parts under the guidance of röntgen rays, and fixation by means of plaster of Paris splints or the Dollinger bandage. In fourteen cases the author controlled the muscular spasms occurring during the reposition of the fractured bones, by means of local anæsthesia. The anæsthetic was either injected between the ends of the fracture or given by the circular infiltration method. The author prefers the latter as the easier and more expedient. When the first method is employed, 10 to 20 ccm. of a 1 per cent novocaine-suprarenin solution are injected directly between the ends of the fractured bone. The anæsthesia is complete at the end of from five to ten minutes. The author anæsthetized two cases in this manner. He recommends the second method, however, as in the first the injection is very painful, the bone fragments very tender, and the solution, easily missing the nerves on account of local hæmorrhages, may readily enter the lumen of a blood vessel and cause novocaine poisoning.

By means of a thin needle, 10 cm. in length, the author infiltrates the parts from as few points as possible; in fractures of the forearm, from 2 points; in fractures of the leg, from 3 to 4 points; and in fractures of the thigh, from 4 to 5 points. These points are about 6 or 7 cm. above the fracture line. In cases of larger hæmatomata they are 10 or more centimeters above. The injections are made to affect the entire transverse section of the part, first the subcutaneous tissues and then the deeper structures, layer by layer. The anæsthetic solution should always precede the needle point. After from 10 to 15 minutes the anæsthesia is complete, the muscular spasm ceases, and the reposition and bandaging of the limb can be accomplished easily. In this manner the author treated, among other cases, four thigh fractures, and sutured two patellas. When anatomical conditions such as those in fractures of the pelvis, ribs, etc., preclude the use of this method, the injections must be made between the fragments of bones. The author claims priority for the application of the circular infiltration anæsthesia in fractures of the thigh.

SIMON.

Speed, K.: *Juxta-Epiphyseal Sprain and Sprain Fracture of the Lower End of the Radius.*

Surg., Gynec. & Obst., 1913, xvii, 241.

By *Surg., Gynec. & Obst.*

The diagnosis of injuries at the wrist covering juxta-epiphyseal sprains and epiphyseal fracture in children and sprain fractures in adults is difficult. These injuries differ from the Colles fracture, which we have gotten into the habit of calling all fractures of the wrist. Light on the subject of lower radial fractures was sought by skiagraphic study of the closure of the lower radial epiphysis. Starting with a child seven years of age, skiagrams were made of subjects a year apart in age up to a twenty-two-year-old adult. The lower radial epiphysis is the most important because it is there that the greatest growth occurs. Accordingly, its health should be guarded to avoid displacements after sprain and fracture and the development of bacterial activity.

A study of the skiagraphic development of this epiphysis demonstrated its growth and closure. At about the eleventh year the ulnar border of the epiphysis begins to close. The closing process slowly travels across toward the inner side of the radius, and the lower epiphysis becomes thicker and larger. The styloid process takes form about the fourteenth year and at the nineteenth year the epiphysis is found to be closed while the styloid process is still growing. The inner side of the epiphysis is the last to close. After the twentieth or the twenty-first year the styloid assumes adult form. On account of the attachment of the strong wrist ligaments in the epiphyseal area, the latter, which is the last to become ossified and is subject to severe strains incidental to falls on the hands, is the site of cracks and fractures before other portions of the bone. As the hand is more often abducted than pronated, the main stress in falls occurs on the internal ligaments. The ulnar border of the radius is held firmly by the radio-ulnar ligament. The latter resists and the styloid process gives first. The median edge of the epiphysis, closing last, leaves a weaker spot here to favor this result. The pronator quadratus muscle, acting above, tends to pull over the upper part of the radius and to approximate it to the ulna and thus gives additional counterpull to the tearing-out force of the internal lateral ligament.

The capsular ligament of the wrist is continuous with the periosteum of the radius, and juxta-epiphyseal sprain, with tearing of these structures, causes symptoms as acute as those resulting from epiphyseal or sprain fracture. In sprain, the swelling and effusion of blood are deferred. In this it simulates fracture, which is but a further action of an identical force. As a rule, if the capsule tears or gives way, the bone does not break. The ligament, however, is stronger than the bone or periosteum, and in the majority of tests on the cadaver pulls out the bone surface, or causes by its line of stress a sprain fracture extending obliquely with no displacement across the epiphyseal area. The mechan-

ism of this type of fracture seems to be divided into the following three stages: (1) a splitting or crushing by the force from the carpal bones; (2) the yielding of the radius at the weak point — i. e., in the vicinity of an old, or present, epiphyseal line — by the breaking up of the causative force; and (3) a cross-strain at the insertion of the capsular ligaments, especially on the anterior aspect with the hand in dorsal hyperextension.

Diagnostic signs of fracture are: (1) a history of sufficient trauma, and (2) a small, sharply localized area of swelling and acute tenderness over the attachment of the ligaments at the lower end of the radius. These findings are pronounced and recur always at the same place when the test is repeated.

Troell, A.: The Treatment of Fractures of the Radius (Über die Behandlung der Radiusbrüche). *Allm. Sven. Läkartidn.*, Stockholm, 1913, x, 577.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports two hundred and six cases of typical fracture of the radius which he treated in the polyclinic in Stockholm in 1911. Usually in simple cases of this kind he replaces the bone at the first sitting without anæsthetization. The correctness of the position is determined by two röntgen photographs. If there is no displacement of the fragments, fixation is not undertaken. In eleven cases a plaster of Paris cast was used, in six the patient being under the influence of an anæsthetic. Five patients were children of not more than twelve years of age. The results were as follows:

In four cases there was perfect anatomical restoration; in one, somewhat faulty configuration of the bone, in one, slight lateral displacement with diminished function, and in seven, normal function.

In one hundred and eighteen cases fixation was obtained with a dorsal splint. In twelve cases at the end of treatment there was complete anatomical and functional recovery. Of the remaining cases examined later recovery was complete in thirty cases and incomplete in forty.

Because of these poor results, the author tried Lexer's bandage. He found, however, that he could not keep it in place. Accordingly he changed to an adhesive bandage, applied according to the same principles as Lexer's bandage. Details are given in regard to the manner in which the adhesive plaster strips were applied. Over these strips Troell placed a Lexer's bandage with cotton wool padding. With this method fixation failed in only one case. Usually the adhesive bandage is worn two and one half weeks. In seven cases there was complete anatomical and functional recovery.

On later examination marked deformity was found in only one case out of twenty-eight. The functional result was good except in a few cases. Three cases suffered injury from the adhesive bandage, pressure necrosis or pustulated eczema. In one case there was prominent palmar flexion with subluxation. The adhesive bandage may cause over-correction.

GIERTZ.

Armstrong, G. E.: Fracture of the Femur. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

The points made by the author were as follows:

1. As clearly established by the Committee of the British Medical Association, the functional result is dependent largely upon the anatomical result. In a considerable proportion of fractures of the shaft of the femur it is impossible by traction and manipulation to secure perfect replacement of the fragments and to retain them in good position. In all cases in which this cannot be accomplished the fragments should be replaced through an incision and retained by a suitable Lane plate. To avoid subsequent misunderstandings the following routine procedure was recommended: The presence of a fracture and the number, position, and shape of the fragments should be determined by means of radiography. If it seems possible to replace by manipulation and extension, these means should be employed, preferably under general anæsthesia. Other radiograms should then be taken to determine the result attained. If satisfactory, well and good. If not, the surgeon should decide whether or not there is a reasonable prospect that better results will be obtained by a second trial. If he feels that he cannot obtain a satisfactory result by manipulation, the plates should be shown to the patient and his friends with a plain, candid statement as to the probable functional result and a recommendation that he be allowed to adopt the open method of treatment. If consent is obtained, the fracture should be plated at some convenient time. If not, the patient must be advised to accept the situation or go to some other surgeon who he thinks can do better for him. In this way all misunderstandings and strained relations between the surgeon and patient may be avoided.

2. In fracture of the neck of the femur, the Whitman position of abduction and flexion is recommended. If the fractured surfaces are kept apposed, the vessels will pass from the Haversian canals of the distal, to the Haversian canals of the proximal, fragment, and bony union will take place. Absorption of the proximal fragment and hyperextension will not develop. If the fragments cannot be apposed by manipulation and position, the distal fragment should be nailed to the proximal fragment through an incision. The head should be regarded as a bone graft. As emphasized by Murphy, there will seldom be any difficulty if the raw surfaces are contacted.

3. In comminuted fractures no fragments should be thrown away. It is not necessary that they should retain their periosteal covering or that they should have any attachment to the soft tissues. They may be removed, placed in warm, normal, saline solution and left there while the upper and lower fragments are brought into position. They can then be replaced in their original position, and treated as a bone graft. They will take perfectly well and contribute to an early and strong union.

4. There is not complete unanimity of opinion regarding the influence of the Lane plates on the rapidity of repair. Some surgeons think that they retard union. It may be difficult to determine this point definitely, but in the writer's experience there can be little doubt that they shorten the period of disability by permitting earlier massage of the muscles and mobilization of the joints.

SURGERY OF THE BONES, JOINTS, ETC.

Krabbel, M.: Plugging Bone Cavities with Free Transplantation of Fat (Zur Plombierung von Knochenhöhlen mit frei transplantiertem Fett). *Beitr. z. klin. Chir.*, 1913, lxxxv, 400.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Bone cavities were plugged with free transplanted fat in 10 cases. Four of these were cases of chronic osteomyelitis, five of tuberculosis and one of osteosarcoma. The technique employed was the same as that followed by Makkas. In five cases the fat healed in promptly, in three the plug was expelled, and in two cases there was a tuberculous relapse.

The proximity of an articular cavity or the necessity of opening such a cavity is not a contra-indication for the transplantation. If there be a tuberculous infection of the soft parts also, besides that of the bones, all of the diseased portions must be removed carefully. If a fistula forms, the plug must be removed immediately to avoid a relapse. The bone-formation advances but slowly and is only moderate after a year's time, as is demonstrated by radiograms.

CARL.

Weiss, R.: The Operative Treatment of Snapping Hip of Luxatio Tractus Iliotibialis Traumatica (Die operativen Behandlung der schnappenden Hüfte, der Luxatio tractus iliotibialis traumatica). *Monatsschr. f. Unfallheilk. u. Invalidenwesen*, 1913, xx, 162.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the case described the painful snapping of the hip occurred after a fall against a railroad track. On operation, a completely isolated tendon-like part of the iliotibial band, the width of a finger, was found stretched over the trochanter, in no way connected with the tendinous or muscular part of the gluteus maximus and completely separated from the tensor fasciæ latæ. The band was cut, as it would have been of no use even if it was sutured to the posterior surface of the trochanter. The Trendelenburg sign was also negative. The patient was able to walk within twelve days after the operation.

GRASHEY.

Schewandin, M.: The End-Results of Lexer's Arthrodesis of the Ankle-Joint (Endresultate der Lexerschen Arthrodes am Sprunggelenk). *Arch. f. klin. Chir.*, 1913, ci, 1000.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Nine cases are reported in which arthrodesis of the ankle-joint was performed by Lexer's method, the use of a wedge of bone from the tibia with periosteum and marrow, or of a section of the fibula throughout its entire thickness. In every case the bone sections were obtained from the patient.

After the operation a plaster of Paris cast was used for from six to eight weeks. At the end of that time an ambulatory splint was worn for from two to four months. The cases have been observed from two to five years after operation. Five cases were examined personally by the author. Four patients sent a written report of their condition. In the first group there was one case of osseous arthrodesis, but in this patient, fourteen months after the operation, the malleolus was fractured to correct the position of the foot. The author believes that this procedure completed the ankylosis. In the second group one patient reports that he walks without pain, steps with the whole foot normally, and that there is no lateral movement.

By this method bony ankylosis in the articulation between the tibia and the astragalus does not occur often. It is more frequent in the articulation between the astragalus and os calcis. The arthrodesis lasts only until the interposed bone is absorbed, which requires different lengths of time in different cases. The cases all made uneventful recoveries.

WITTEK.

Depage: Resection of the Posterior Tarsus (Résection du tarse postérieur). *Ann. Soc. belge de chir.*, 1913, xxi, 97.

By Journal de Chirurgie.

Depage states that methods for resecting the tibiotarsal joint and the posterior tarsus are very numerous and a young surgeon may find it very difficult to make a choice between them when treating tuberculosis of the foot. This multiplicity of methods is due in part to the multiplicity of the sites of infection.

1. When the astragalus is tuberculous it may be removed by Vogt's method. While the removal of the astragalus is often practical, it is, however, often insufficient, for even if the adjoining synovial membranes are all removed, tuberculous foci may be left. Furthermore, this operation leaves a flat-foot which is not very serviceable.

2. Another method is resection of the tibiotarsal articulation by Hueter's method. This gave excellent results in the case reported by Depage. The tibial plateau, astragalus, calcaneum, and even the anterior tarsus may be removed, and all of the tuberculous foci may be cut away.

3. The mid-tarsal resection by two lateral incisions according to Koenig's method is not as good as the preceding.

4. Kocher's method of resecting the posterior tarsus and tibiotarsal articulation is of great value.

5. The tibiotarsal resection through an incision in the sole of the foot as recommended by Busch, Ssabanejew, and Bogdanik has no special advantages.

6. The method of posterior tibiotarsal resection of Vladimiroff-Mikulicz as modified by Krodnitz

and Kümmel gives a very serviceable foot, though the original operation caused shortening and talipes equinus.

It is difficult to say that any one of these methods is better than the other, and Depage advises making a careful radiographical study.

That method should be used which will best satisfy the requirements of the case and the following conditions: Preservation of the heel, and a clean section of the bone so that the surfaces made may be readily coapted.

J. DUMONT.

Zimmerman, B. F.: Tendon Transplantation in Talipes from Anterior Poliomyelitis. *Am. J. Surg.*, 1913, xxviii, 297. By Surg., Gynec. & Obst.

Manual and mechanical correction of talipes deformity is usually doubtful. Tendon transplantation with or without arthrodesis is the most appropriate method. Zimmerman believes that the paralysis of the muscle in talipes is real and is not due to lack of elasticity from overstretching. In the paralytic foot arthrodesis of the ankle joint may be performed regardless of the age of the patient.

The author quotes Campbell's rules for tendon transference, i. e. (1) the transferred muscle must be strong and healthy; no attempt should be made to utilize a muscle that is even slightly paretic; (2) the transferred tendon should be laid parallel for a considerable distance to the tendon for which it is to act in the future; (3) the transferred tendon must be tunneled through the subcutaneous fat in order that no adhesions may form.

Wetzler also is quoted: "(1) Paralyzed tendons do not stretch to an abnormal extent nor do they

tear as easily as is assumed. (2) Sutures anchored to paralyzed tendons withstand traction quite well, contrary to the views expressed by Lange and others.

Zimmerman then reports three cases of paralytic club foot with varus deformity. In these he first performed manual correction with tenotomies and fasciotomies, and a month later transplanted a portion of the tibialis anticus into the periosteum of the outer side of the foot. In two of the cases he performed arthrodesis of the calcaneo-cuboid joint. The deformity should first be corrected and the muscle restored to normal tone.

J. O. WALLACE.

ORTHOPEDICS IN GENERAL

Lucas, W. P., and Osgood, R. B.: Human Carriers in Poliomyelitis. *Am. J. Orth. Surg.*, 1913, xi, 135. By Surg., Gynec. & Obst.

Lucas and Osgood have produced typical poliomyelitis in rhesus monkeys by means of injections of a nasal secretion obtained from a boy who had had two typical attacks of poliomyelitis with resulting paralysis, and from which serum all other bacteria had been eliminated. The nasal secretion had persisted between the attacks. A sister of the boy had an attack of poliomyelitis after sleeping on a bed previously occupied by her brother. The nasal secretion which contained the virus was obtained over two years after the first attack and about four months after the second. This would seem to show that the virus of poliomyelitis may persist in the nasal secretion of human beings who have recovered from an acute attack of poliomyelitis.

GORDON HEYD.

SURGERY OF THE SPINAL COLUMN AND CORD

Bucholz, C. H.: Röntgen Ray Diagnosis of the Lumbar Spine and the Sacro-Iliac Articulations. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. By Surg., Gynec. & Obst.

Bucholz states that the study of the lumbar spine and the sacro-iliac articulations, especially that of the fifth lumbar vertebra, involves a great many problems of interest for the orthopedist, the neurologist, and the genito-urinary surgeon, as well as for the radiologist and the anatomist. Although the work of Goldthwaite, Boehm, Ludloff and many others has traced the path, much work is still to be done.

In the anatomical-radiological part of his paper special attention is called to the fifth lumbar vertebra and the particular difficulties of interpreting them by the X-ray because of the following factors: (1) The angle of inclination which cannot be averted in all cases; (2) the typical differences in the shape of the fifth and the upper lumbar vertebrae; and (3) the anatomical variations which are classified according to the amount and kind of variations of the transverse process of the last lumbar vertebra and

their connection with the sacrum, and the number of lumbar and sacral vertebrae. As examples of these different types several lantern slides were shown, some of which have been taken from Osgood's collection of orthopedic, medical, and surgical patients, which has been supplemented by the author, and others from Dodd's collection of röntgenograms of specimens from the Warren Museum at the Harvard Medical School.

In the pathology section of Bucholz's paper, brief attention was called to the following subjects: Fractures and dislocations of the lumbar vertebrae especially in the lumbo-sacral region, spondylolisthesis, lateral curvature, infectious arthritis, the various forms of hypertrophic arthritis, diseases of the spine, and affections of the sacro-iliac articulations.

The diagnosis of fractures of the fifth lumbar vertebra and of dislocations involves great difficulties and often cannot be made from the X-ray plate alone without a knowledge of the history and clinical symptoms.

Boehm's theory that lateral curvature is caused by anatomical variations is still under discussion, since

further experiences have shown that lateral curvature occurs in cases which do not show anatomical variations and that many cases with distinct anatomical variations have no signs of lateral curvature.

A differential diagnosis of spinal diseases and injuries is occasionally impossible. In the author's opinion, the X-ray diagnosis of the sacro-iliac displacement as described by Goldthwaite and Osgood is impossible, at least in the great majority of cases. The explanation of certain clinical pictures by such displacement rests mainly, if not solely, upon the history and the interpretation of the clinical symptoms.

The explanation that certain cases of backache may be due to variations in the shape of the last lumbar vertebra gives a bright outlook for a better understanding and more rational treatment of such cases, although, on the basis of our present knowledge, the occurrence of anatomical variations, in many such instances, may be considered as only a coincidence.

Lovett, R. W.: The Treatment of Scoliosis. *Tr. Internat. Cong. Med., Lond., 1913, Aug.*

By Surg., Gynec. & Obst.

A discussion of the modern treatment of scoliosis must begin with a definition of the term. The word "scoliosis" is used to include both the functional and the organic curvature of the spine, and a failure to recognize the division between the two will result in confusion in the matter of treatment and in the estimation of results.

Functional scoliosis, or false scoliosis, is a condition in which the spine is normal as regards gross changes, but the child stands with the spine curved to one side. The curve disappears when the body is in the recumbent position and is amenable to cure by gymnastic treatment.

Organic or structural scoliosis, on the other hand, is a change in the shape of the bones of the spine. The curve does not disappear in the recumbent position and it is accompanied by a twist of the vertebral column in a horizontal plane, the backward twist being on the side of the convexity of the lateral curve.

The functional form of scoliosis often changes to the organic form, but not to the severe type.

The most severe cases of organic scoliosis are due to congenital anomalies of the spine, empyema, infantile paralysis, or rickets. The position in which children sit at school may cause a mild scoliosis, but not the more severe forms.

The treatment of structural scoliosis is a difficult problem. Gymnastic treatment on the whole has been unsuccessful, for, as this form of scoliosis is a bone deformity, attempts to remedy by it muscle treatment are unreasonable. Forcible correction dates from the time of the elder Sayre, and in the opinion of the writer it constitutes the most rational treatment for the moderate and severe forms of structural scoliosis. The milder forms in many cases are amenable to gymnastic treatment.

Forcible correction consists of the application of a jacket with the patient in a corrected position. Various techniques are employed. The patient is suspended and lying on the face, side, or back. According to the method described by Abbott, the patient lies on the back with the spine flexed, and apparently in this position better correction is obtained than in the others. By whatever method applied the jacket should be cut away over the back of the collapsed side of the thorax, and pads should be inserted between the prominent parts of the thorax and the jacket, especially in the front.

The fear of permanent muscular atrophy from the use of such jackets appears to be unfounded. In cases in which an opportunity has been afforded to make observations over a long period of time the results have been found to be permanent. The patient must be retained in the corrected position for a good many months, at the end of which time a removable jacket and gymnastic exercises are of use. The whole treatment is not likely to take less than two years in cases of structural scoliosis of moderate or severe grade.

Adams, Z. B.: Treatment of Lateral Curvature of the Spine by the Forbes Method. *Am. J. Orth. Surg., 1913, xi, 97.*

By Surg., Gynec. & Obst.

Adams' article showed by diagram the course traveled by the vertebra from its normal position to the position which it occupies in scoliosis. He explained that the forces which move the thoracic vertebra are furnished by the ribs. The spring tension of the ribs causes the vertebrae to rotate.

Because of the shape and interlocking of the vertebrae, there is no rotation of the spine without lateral bending, and no lateral bending without rotation.

Another diagram was shown to illustrate the difference in the direction of the forces as applied by Abbott and by Forbes.

A simple method was described for applying jackets in the Forbes position of rotation.

Bade, P.: The Treatment of Spondylitic Paralyzes (*Zur Behandlung der spondylitischen Lähmungen*). *München. med. Wchnschr., 1913, lx, 1432.*

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author discusses the open and closed methods of treatment that have been employed heretofore. The new method consists in the application of an apparatus made up of sectional splints according to plaster of Paris models and consisting of parts for the feet, legs, and thighs, an abdominal corset, a shin rest, caps for the posterior part of the head, and an extension for the head. The joints in the apparatus are held in position by antagonistically acting rubber bands so that the position of the apparatus corresponds to the upright position of the body. The patient with the apparatus applied is placed in a walking chair and in a short time learns to use one group of muscles after another (8 days to 9 months).

Simultaneously with this treatment massage and gymnastics are begun twice daily. The individual parts of the apparatus are gradually taken off as the patient improves.

The advantage in this method lies in the fact that the patient is able to assume the upright posi-

tion immediately. As a result there are brought about more favorable circulatory conditions in the spine which favor the absorption of an abscess or oedema. Furthermore, on account of the passive stretching of the muscles the spasms are decreased.

SPITZY.

SURGERY OF THE NERVOUS SYSTEM

Stoffel, A.: New Facts in Regard to the Nature of Sciatica and New Methods for the Operative Treatment of the Disease (Neues über das Wesen der Ischias und neue Wege für die operative Behandlung des Leidens). *München. med. Wchnschr.*, 1913, lx, 1365.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Stoffel states that it is incorrect to consider the sciatic nerve as a whole. It is necessary to differentiate within it a number of motor and sensory tracts similar to those in the trigeminal nerve. Diseases of these different individual tracts produce different clinical symptoms. As the various tracts always occupy the same position within the nerve it is possible to attack them individually by surgical measures. The Stoffel model of the nerve shows the individual tracts in cross section. The nerve is

exposed, the diseased tract is mobilized for a distance and severed. Neurexairesis of the proximal and distal part may then be performed. The absolute anæsthetic zone resulting is surprisingly small. The relative anæsthetic zone immediately following the operation is much larger but in time gradually decreases. Trophic disturbances or subjective disturbances never occur as a result of the anæsthesia.

In a severe case that resulted in scoliosis, this condition immediately improved after the operation (extirpation of the Nn. cutan. suræ med. et lat. and its tracts in June, 1912) without any special after-treatment. The patient since then has been absolutely without pain. The author intends to publish another article in regard to further details.

SPITZY.

MISCELLANEOUS

CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESES, ETC.

De Quervain, F.: The Position of Tumors in Nature (Über die Stellung der Geschwülste unter den Naturerscheinungen). Leipzig: Vogel, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In this lecture, delivered before a general scientific audience, the author gives his experiences of many years in regard to the tumor problem. In general, he recognizes three kinds of morbid stimuli: (1) Physical; (2) chemical; (3) parasitic. The third group cannot be sharply divided from the others, as its effect may be chemical as well as mechanical, but it differs from them in that its exciting cause is a living substance. The reactions following their action are also divided into three main groups: (1) Reparatory; (2) inflammatory; (3) tumor-forming.

The relation between cause and effect is discussed briefly with good examples. The parasitic effects, which are discussed more at length, often cannot be limited by time or place. The main part of the work deals with the neoplastic reactions. Their formation by various irritants, and analogous processes in the vegetable and lower animal kingdom, are ably discussed. Two tables give a survey of the various actions and reactions. Briefly discussed are tumors, especially congenital tumors, in which no irritant is demonstrable. In a theoretical investigation the

author regards it a mistake to separate tumors into benign and malignant, and believes that the tumor problem should be treated as a whole. For the clinician, of course, the separation is important. Every cell has the inherent ability to form tumors. The author ends his interesting study with a discussion of the subjects of predisposition and immunity, the purpose of tumor formation, healing and prophylaxis.

KLEINSCHMIDT.

Jansen, M.: On the Vulnerability of Fast Growing Cell Groups. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The author believes that the vulnerability of cells is in direct proportion to the rapidity of their growth. This principle is illustrated by the destructive action of the röntgen ray on fungus granulations, sperm cells, and other rapidly proliferating cells. This decreased resistance on the part of the more rapidly proliferating cells is seen also in cases where in the same tissue there is a difference in the rapidity of the growth of the cells. For example, the cells of the epiphyseal cartilage discs can be entirely stopped in their growth by the action of the röntgen ray without interfering with the remaining parts of the skeleton.

In rachitis the same principle is met. The disease in early infancy manifests itself in the form of cranial tabes, a consequence of the rapid growth of the

cranial bones to accommodate the rapidly enlarging brain. In later childhood, the disease affects mainly the skeleton of the extremities, which, during this period, shows the more rapid growth. The author explains the condition of achondroplasia in a similar way. He attributes the lack of cartilage development in this condition to the fact that the foetus is enclosed in an amniotic sac that is too small, and that "squeezes out its blood or most of its blood . . . The cartilage, the glutton of the tissues, suffers first and most from this famine."

The author believes that the increased vulnerability of rapidly growing cells may explain the localization of other pathological conditions, as, for example, the localization of osteomyelitis to epiphyseal ends of the diaphyses, and Czerny's exudative diathesis to the much exposed outer and inner coverings of the young body. The same principle may play a part in the development of cancer and explain the disappearance of certain rapidly growing tumors during the course of severe infection.

BARNEY BROOKS.

Weil, G. C.: Spontaneous and Artificial Development of Giant Cells in Vitro. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1.

By Surg., Gynec. & Obst.

Weil reports his studies on the method of development of foreign-body giant cells made by carefully observing their formation in cultures of splenic tissue in vitro, lycopodium spores having been added to the medium to act as foreign bodies. He found that the cellular activity about the foreign bodies follows a rather definite and uniform course:

1. Polymorphonuclear leucocytes with some lymphocytes promptly migrate to the region of the foreign body, surround it, and show amoeboid and phagocytic activity for several days, degenerating about the sixth day to a homogeneous mass with irregular nuclear masses, not a giant cell.

2. At the end of about thirty-six hours there appear in the culture large mononuclear cells which are readily distinguished from developing connective cells and which approach the foreign body by their amoeboid activity. These cells engulf the small foreign bodies, and on coming in contact with larger ones flatten out along their surfaces and become multinucleated foreign-body giant cells.

Weil was unable to observe the development of the giant cell directly, but by comparing the number of large amoeboid cells approaching a given foreign body during the development of the culture with the number of nuclei in the giant cells about the foreign body as seen in the final stained preparation, he concludes that the giant cell is the result of nuclear division in an individual cell.

H. B. LODER.

Harris, W. H.: The Association of Tuberculosis and Malignant Growths. *J. Med. Research*, 1913, xxviii, 471.

By Surg., Gynec. & Obst.

At present it is an undetermined problem just what relationship it is, if any, that tuberculosis and

malignant tumors occurring in the same area bear to each other. The author records his observations in the case of a white man, forty-five years of age, who presented clinical signs and symptoms indicative of laryngeal neoplasm. As far as could be determined by clinical methods, the lungs and other organs were normal. Repeated sputum examinations showed that no acid-fast bacilli were present. The Wassermann reaction was negative. On operation an irregular growth was found protruding just between the junction of the thyroid cartilages. Microscopical section showed this to be a distinct epidermoid carcinoma. A complete laryngectomy was then performed. Microscopical study of serial sections revealed the presence of a distinct epidermoid carcinoma of the spino-cellular type. In the stroma were seen epithelioid cell infiltrations with lymphoid and plasma cells scattered here and there. These infiltrations arose from underlying well-defined, miliary tubercles, which presented a central area of caseation with circumferentially arranged epithelioid cells, a few plasma and lymphoid cells, and an occasional giant cell. One year after the time of operation there were no evidences of recurrence of either the carcinoma or the tuberculosis. The patient had gained over 30 pounds in weight and was of ruddy color and apparently in the best of health.

The author thinks that perhaps in this combination in the larynx, the tuberculosis provoked the tumor formation by its destruction of the tissue relationship. He adds that the tumor probably found in the diseased area of tuberculosis the proper conditions for development; in other words, that the tuberculosis formed a primary pathological soil upon which the tumor thus provoked continued to flourish while the tuberculosis in part yielded.

GEORGE E. BEILBY.

Freund, E.: The Causes of Carcinoma (Die Ursachen des Carcinoms). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Freund asserts that in looking for the causes of carcinoma we must consider not the irritation that gives immediate rise to the growth, but the abnormality in the organism which allows it to produce that effect in the one individual of the many who are acted upon by the same irritant. Moreover, in the majority of the persons affected by carcinoma there is no irritation that might cause it. Therefore there must be a predisposition. Freund and Caminer have found that the blood of carcinoma patients acts very differently from the blood of normal individuals toward carcinoma cells. Normal blood destroys carcinoma cells; the blood of carcinomatous patients does not destroy them, and it prevents their destruction by normal blood.

The destructive power of normal blood on carcinoma cells is due to its content of a hitherto unknown fatty-acid combination that can be extracted with ether. This substance is lacking in carcinomatous blood. Moreover, carcinomatous

blood contains a pathological nucleoglobulin that is different chemically from normal nucleoglobulin in that it is richer in ether extract and carbohydrates, and, biologically, in that it combines the normal fatty-acids and makes them ineffective and protects the carcinoma cells from destruction by normal blood serum.

The important question as to whether these variations from normal are a cause or a result of carcinoma has still to be decided in part.

Stomach and other ulcers that are frequently the location for carcinoma differ from normal tissue in that they lack the cell-destroying fatty-acids.

Röntgenization, which often results in cancer, may neutralize this cell-destroying acid in the skin. The cell-destroying acid is lacking in places where carcinoma appears easily, even before the appearance of the carcinoma. The lack of the acid is therefore to be regarded as a local prerequisite for cancer.

It has been determined that in contradistinction to normal nucleoglobulin, the pathological nucleoglobulin has the property of attracting carbohydrates to it from the serum, and accordingly those substances that are found in special abundance in carcinomatous tissue. The nucleoglobulin seems to be the substance that provides the carcinoma with its special nutritive material. It has been determined how the pathological nucleoglobulin is formed from normal nucleoglobulin. The extracts of various organs from carcinomatous individuals can be added to a normal nucleoglobulin solution without changing its action upon carcinoma. But if an extract from the contents of the small intestine of a carcinomatous individual be added to a normal euglobulin solution, it takes on the chemical and biological properties of a carcinomatous nucleoglobulin and exercises a protective action on the carcinoma cells against normal serum. This active substance of the intestinal contents has been isolated. It is a hitherto unknown unsaturated fatty-acid combination that is found only in the small intestine of carcinomatous individuals. We must, therefore, assume that the katabolism of food in the intestine of carcinomatous subjects is pathological, giving rise to an abnormal substance which causes abnormal protein compounds and thereby a pathological state of nutrition of the cells.

A. Goss.

Ihmori, M.: The Disappearance of a Round-Cellled Sarcoma in the Course of Erysipelas (Verschwinden eines Rundzellensarkomes im Verlauf eines Erysipels). *Nippon-Geka-Gakkai-Zasshi*, 1913, xiv, 65. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

A woman, fifty-six years of age, was operated upon for an ovarian cyst of the right side. A tumor the size of a hen's egg was found on the left side of the umbilicus. At the end of two months it was as large as a child's fist. It was then extirpated. After a short time a tumor as large as a fist, with a nodular surface, reappeared, accompanied by severe pain. A hæmorrhagic erysipelas bullosum set in

and within a week both the tumor and a metastasis in the inguinal glands disappeared. Although the patient recovered from the erysipelas, she died from exhaustion.

OYAMA.

Citelli, S.: A Very Useful Method in Treating Hysterical Aphonia (Sur une methode tres utile pour guérir l'aphonie hysterique). *Tr. Internal. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Citelli's method consists in making very strong, painful, and sudden pressure when the patient is not expecting it, on the large cornua of the hyoid or the thyroid cartilage. This should be done with the first two fingers of the right hand after having caught the nape of the patient's neck with the left. The physician then demands in a loud tone of voice that he speak and the patient, frightened out of obedience to his morbid state of consciousness, finally answers in his normal voice.

Smith, G. M.: Morphological Changes in Tissue with Changes in Environment; Replacement of Surface Epithelium of Grafted Tissue by Adjacent Epithelium. *J. Med. Research*, 1913, xxviii, 423. By Surg., Gynec. & Obst.

The author's purpose in this paper is to record a number of experiments showing invasion of the surface epithelium of grafted tissue from hollow abdominal organs by neighboring cells, and to define some of the factors which underly the process.

Operative technique: Whenever possible a direct implantation of one organ into another was made by the suture method. In cases in which, for topographical reasons, a direct implantation was found to be impossible, the following method of transplantation in two stages was adopted for the transfer of tissues. By a preliminary operation a loop of intestine supplied with a freely movable mesentery was sewed to the outer wall of the organ from which the tissue was to be removed for transplantation. At the end of a week or ten days the second operation of tissue transfer was performed. The tissue of the organ to be transplanted was resected in such a manner that its center lay at the point of its attachment to the intestinal loop, from which it then received its new blood supply. The tissue was next trimmed down to the desired size, usually from three to four centimeters in diameter, and was ready for implantation. A second abdominal incision was made over the organ about to receive the graft, and the tissue to be transplanted, attached to the loop of intestine and properly protected by gauze, was drawn through the peritoneal cavity and brought into a position suitable for the implantation. In this way tissues from the gall-bladder, urinary bladder, or uterus could be readily transferred to any part of the peritoneal cavity for anastomosis with other hollow organs.

Smith's article is based on the results of fifty operative experiments on dogs, and the protocols of illustrative cases are given. From this experimental study the author draws the following conclusions:

Following autoplasmic transplantation of part of one hollow abdominal organ into the wall of another the epithelial surface of the implanted organ may undergo a change in structure. This change occurs when the epithelium of one organ differs in type from that of the other and is the result of the replacement of the epithelium of the graft by another that is derived from the organ that has received the implanted tissue.

Replacement of the epithelium of grafted tissue depends upon the change in environmental conditions. Changed physical and chemical conditions dependent upon the peculiar function of the organ which receives the graft affect unfavorably the life and growth of transplanted epithelium, while the same conditions favor the activity of the regional invading cells.

Whereas a replacement of the epithelium of grafted tissue may follow implantation into another hollow organ, the epithelium of the same organs gives no evidence of replacement when their tissues grow in contact under equal conditions within the peritoneal cavity.

GEORGE E. BEILBY.

Küttner, H.: The Importance of Free Transplantation in Modern Surgery (Die freie Transplantation und ihre Bedeutung für die moderne Chirurgie). *Naturwissenschaft.*, 1913, i, 513.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This article is a short review of the theory and practice of free transplantation in modern surgery. In contrast to the possibilities in the lower animal orders, and in the embryonic state of the lower vertebrates, transplantation in man is limited within very narrow boundaries. Autotransplantation is the only form in which there is any certainty that the transplanted tissue will remain alive. Material for transplantation must be obtained from other human beings if the patient himself cannot furnish it. Transplantation from animals to man is now rejected. Küttner believes that in this we go a little too far. He reports a successful transplantation performed a year and a half ago of a fibula from a macacus cynomolgus to a man. According to the röntgen picture, the monkey's bone remained unchanged and there were no signs that absorption had taken place.

Bruck gives the biological relationship of man and the higher apes as follows: (1) Man; (2) orang-utan; (3) gibbon; (4) macacus rhesus and nemestrinus, and (5) macacus cynomolgus. He thinks that biologically man is about as far removed from the orang-utan as the latter is removed from the macacus rhesus. According to Friedenthal, man and the macacus are considerably nearer than rabbits and guinea pigs.

Aside from the particular form of hetero-transplantation mentioned, the only possible transplantation in man is auto- or homo-transplantation. The transplantation of entire organs by suturing the blood vessels is successful only on autotransplantation and therefore has no practical value. The attempt to perform homoplastic transplantation in a

position of parabiosis has not given satisfactory results. Transplantation of glandular organs such as the thyroid, without regard to the blood vessels, has shown that even in homoplastic transplantation from closely related individuals absorption eventually takes place in spite of beginning reparative processes and that only on autotransplantation can any increase in size of the transplanted organ be observed. Küttner recommends therefore, instead of transplantation, the administration of macerated normal human thyroid substance. According to Landois' experiments, the suprarenal glands also persist only on autotransplantation.

The author considers briefly the possibilities of transplanting suprarenals, testes, ovaries, muscle and nerve tissue, entire extremities, epidermis, skin, mucous membrane, fat, fascia, tendons, serous membrane, blood vessels, bone, periosteum, cartilage, and joints. He goes into more detail in considering the transplantation of joints from the cadaver. Before using material from the cadaver, which should be as fresh as possible, a bacteriological examination should be made. Two cases have shown that material can be used successfully twenty-seven and thirty-five hours after death. Therefore, there is sufficient time for a bacteriological examination if it be hurried. A description is given of two successful cases of transplantation of bone from the cadaver for chondrosarcoma, and further use of such transplantation is recommended.

HELLER.

Ssisemski, W. W.: The Clinical Character and the Treatment of Railway Injuries (Der klinische Charakter und die Therapie der Eisenbahnverletzungen). *Russk. Vrach.*, St. Petersburg. 1913, xii, 24.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports five hundred and two injuries to railroad workers observed in the three hospitals of the Nikolai railroad from 1904 to 1910. Of these, ninety-two cases were contusions with no mortality; one hundred and ten, wounds of soft tissues with a four per cent mortality; seventy, simple fractures with a mortality of five per cent; one hundred and ninety-seven, compound fractures with a mortality of thirty-three per cent, and thirty-three, miscellaneous injuries such as burns, luxations, concussions of the brain, etc., with a mortality of thirty per cent. Ssisemski characterizes railway injuries as follows: 1. They are generally multiple. 2. All wounds are infected. 3. They are complicated by severe contusions. 4. There is severe hæmorrhage. 5. The wound surfaces are large. Injuries of this kind have a characteristic course which the author divides into three periods: 1. A period of shock lasting from a few hours to twenty-four hours. 2. A period of recovery from the wound lasting from three to five days. 3. A period of recovery of the body from infection and intoxication, the duration of which depends largely on the size of the area injured. The treatment should be confined in the first period to combating the shock by giving large doses of

morphine and saline infusions of 2000 cc. and more. Operative procedures should be undertaken during the second period and should be as radical as possible. The following principles should be observed: 1. Wounds of the soft parts should be given open treatment. 2. In complicated fractures of the long bones, especially if the large joints are involved, a high operation is to be preferred to conservative treatment. 3. All depressed fractures of the skull should be trephined. In the third period general tonic treatment is most important. Warm baths and alcoholic compresses are recommended.

RIESENKAMPFF.

SERA, VACCINES, AND FERMENTS

Sahli: Theses on Tuberculin Treatment. *Lancet*, Lond., 1913, clxxxv, 379. By Surg., Gynec. & Obst.

All of the various tuberculins are essentially identical. The active principle is the protein of the tubercle bacilli.

To avoid disastrous mistakes in therapeutic dosage it is advisable to provide the practitioner with tuberculin in suitably graduated dilutions.

The use of tuberculin for diagnostic purposes ought to be condemned. It is unreliable, both positively and negatively. Diagnostic injections are dangerous.

Tuberculin treatment is free from danger only if more obvious clinical reactions are avoided.

In advanced cases tuberculin treatment may sometimes produce a certain symptomatic effect, but this effect does not compare with the utility of tuberculin in incipient cases.

The general practitioner, and especially the family physician, should render himself proficient in tuberculin treatment.

The theory of the therapeutical action of tuberculin may now be regarded as well established. The significant factor is the increased production of that which Sahli has called "inflammatory antibodies" and the specific tuberculin amboceptor.

Tuberculin acts favorably only when the human organism is not already sufficiently under the influence of absorbed tuberculin.

It is not necessary to increase the doses of tuberculin to the furthest limit of tolerance. Many cases improve more with a much smaller dose.

The large doses of tuberculin recommended recently for the purpose of reducing temperature have no curative value.

In tuberculin treatment we look for only stimulation and activation of the counteractions of the body at each injection.

All localized tuberculosis is suitable for tuberculin treatment provided that the patient's system is not already overloaded with tuberculin and he is, therefore, too seriously ill. As a rule, acute cases cannot be treated by tuberculin.

Tuberculin treatment by means of multiple cuti-reactions has been proved harmless and useful especially for incipient cases.

Treatment with well-diluted tuberculin is a real and great advance in therapeutical progress.

DONALD C. BALFOUR.

Von Behring, E.: A New Diphtheria Antitoxin (Über ein neues Diphtherieschutzmittel). *Deutsche med. Wchnschr.*, 1913, xxxix, 873.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

This article is a short review of a paper read by von Behring before the Congress of Internal Medicine in Wiesbaden on April 18, 1913. The remedy, designated by him as M_1M_1 or MM_1 consists of a mixture of diphtheria toxin and antitoxin, and represents in its composition the result of exacting experimental studies made by him on all available animals. Purposes of the vaccination are: (1). To produce a long-continued immunity. (2). To acquire an anthropogenous—i.e., native human antitoxin—from highly immunized subjects for passive immunization in place of the usual foreign antitoxin secured from the horse. (3). To effect the more rapid removal of diphtheria bacilli in diphtheria carriers.

The injections are made subcutaneously and intramuscularly. An exact program is given for the test. After injection of the material, many antibodies are formed rapidly and there is a rise of fever. Most of these antibodies disappear from the blood just as rapidly as in the usual passive immunization with the serum. When the new remedy is used, however, a sufficient quantity of the newly formed immune bodies remains in the blood for longer periods as a protection against the disease. In the horses that he immunized with diphtheria toxin von Behring was able to demonstrate the presence of antibodies in the blood five years after the last vaccination. In one case a child was immunized with an anthropogenous serum gained from another child.

It was found that this anthropogenous antitoxin as regards its disappearance from the blood does not differ materially from the autogenous antitoxin acquired in the process of active immunization. The absolute harmlessness of the remedy has been proved by the trials made hitherto (eighty cases). Similar to Jenner's vaccine-therapy, one to two injections of von Behring's new remedy produce long-continued protection against infection without injuring the health of those vaccinated. Besides being of eminently practical significance, von Behring's new discovery modifies very materially our views on the effect of toxin on antitoxin. According to his results, a definitive and irreversible neutralization of the toxin in vitro such as has hitherto been supposed to take place is impossible.

ECKERT.

Cruickshank, J., and Mackie, T. J.: Alterations Produced in Complement-Containing Serum by Introduction of Lecithin. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1. By Surg., Gynec. & Obst.

Cruickshank and Mackie report a highly technical research on the nature of complement action. Lecithin prepared from egg-yolk was rapidly added to diluted serum and the globulin and albumin

fractions then separated by precipitation of the former with carbon dioxide gas. The lecithin fractions thus obtained, as well as the whole serum, were tested as to their hæmolytic power in various combinations. The authors summarize their results as follows:

1. The introduction of lecithin into complement-containing serum of the guinea-pig does not materially alter the complement dose; in the case of rabbits' serum the complementary activity is frequently increased.

2. The albumin fraction from a serum treated with lecithin is as actively hæmolytic for sensitized corpuscles as the original complement, while the globulin fraction retains the property of acting effectively with the ordinary albumin fraction.

3. The addition of lecithin to ordinary albumin fraction after separation does not enhance the complement activity of the fraction.

4. The lecithin must be mixed rapidly with the serum, or with the water used for dilution, in order to produce the effect described; slow admixture does not yield an active lecithin-albumin fraction.

5. The albumin fraction of a serum treated with lecithin is "absorbed" by complement-absorbing agents; it can also replace the complement in the Wassermann reaction.

6. The activity of the lecithin-albumin fraction is dependent upon the presence of "complement" in the original serum.

7. Lecithins differ markedly with regard to their power to produce the alterations described.

The authors suggest that lecithin acts by rendering active a component of a complement which is normally present in an inactive or latent state, but they feel that this theory is not complete enough to account for the increase of complement activity which results with certain rabbit sera merely on the addition of lecithin.

G. G. SMITH.

Auer and Van Slyke: A Contribution to the Relation Between Proteid Cleavage Products and Anaphylaxis. *J. Exp. Med.*, 1913, xviii, 210.

By Surg., Gynec. & Obst.

On examination of the anaphylactic lung by means of Van Slyke's amino nitrogen method, the authors found no evidence of an increased amount of proteid cleavage products. They conclude that the investigation gives no support to the hypothesis that the true anaphylactic lung of the guinea pig is caused by the products of protein cleavage.

JAMES F. CHURCHILL.

BLOOD

O'Brien, R. A.: Rate of Reproduction of Various Constituents of Blood of Immunized Horse After a Large Bleeding. *J. Pathol. & Bacteriol.*, 1913, xviii, 89.

By Surg., Gynec. & Obst.

Using the blood of two immunized horses from each of which had been taken ten litres, O'Brien followed the reproduction of various constituents for

thirty-four and forty-seven days respectively. He gives charts and tables showing his results, which he summarizes as follows:

1. The number of white cells varies widely and irregularly.

2. The hæmolytic titre remains practically constant, the variations being at most only ten per cent from the initial figure.

3. The total amount of salts present does not decrease, but may be increased ten per cent.

4. The content of all other blood constituents falls. The hæmoglobin and numbers of red cells fall together to 50 or 60 per cent of the initial figure.

5. The curves of total proteins and diphtheria antitoxins show a close relation.

G. G. SMITH.

Heyter, H.: Contributions to Hæmophilia (Kasuistische Beiträge zur Hämophilie). *Mitt. a. d. Hamb. Staatskrankenanst.*, 1913, xiv, 9.

By Zentrabl. f. d. ges. Chir. u. i. Grenzgeb.

Three cases of hæmophilia observed for a period of ten years are reported. The first case was that of an hereditary bleeder, in whom puberty had no effect upon the disease, except to change the early joint hæmorrhage to renal hæmorrhage. The latter stopped after rest in bed, a diet poor in meat, and the administration of gelatine, calcium salts, serum, and calcine. In the second case there was a congenital anomaly but no hereditary element. Hæmorrhage into the joints predominated, and was treated at first with iodoform-glycerin injections, as an incorrect diagnosis of tuberculosis had been made. Ovarian tablets had no curative effects, but calcium chlorate (a 2 per cent solution, three tablespoonfuls daily) had a good effect. A severe hæmorrhage in the floor of the mouth necessitated a tracheotomy. The third case was a typical hereditary bleeder (over four generations). Effusions into the joints were prominent. Ovarian tablets were effective. Of theoretical interest, and perhaps of practical significance, is the recommendation of ovarian tablets and calcine. Grant made his deductions from the fact that women are practically exempt from hæmophilia. Suspecting an internal secretory, antagonistic hormone, he wished to secure this in the organ extract, and administer it to the male body. Calcine is a combination of calcium and gelatine; the hæmostyptic action of the two components is well known. Besides calcine, a meat-free diet, milk, uncooked fruit, and abstinence from alcohol are recommended for bleeders.

KREUTER.

BLOOD AND LYMPH VESSELS

Hesse, E.: A Palpatory Symptom of Valvular Insufficiency in Beginning and Invisible Varices (Über ein palpatorisches Symptom der Klappeninsuffizienz bei beginnenden und nicht sichtbaren Varicen). *Beitr. z. klin. Chir.*, 1913, lxxxv, 591.

By Zentrabl. f. d. ges. Chir. u. i. Grenzgeb.

In answering the question as to whether valvular insufficiency of the vena saphena magna is present

or not when Trendelenburg's symptom is not visible to the eye, Hesse argues that the symptom described by Hackenbruch as "fluctuation shock" (a wavelike motion in a centripetal direction) is not to be regarded as physiologically normal, as it is also observed when the valves of the saphena are sufficient. On the other hand, the symptom given by Schwarz, a wave-like movement in a centrifugal direction, is proof of a valvular insufficiency: palpation of the proximal segment of the saphena produces fluctuation in the lower parts of the saphena. Hackenbruch's symptom of stenotic murmur ("Durchspritzschwirrens") has also some significance. Hesse describes a new symptom, palpation of the regurgitative blood stream, which is of value in patients with so-called invisible or beginning varices—nutritional disturbances in the leg, ulcers, and difficulties in walking that cannot be accounted for.

The saphena is looked for on the inner side of the knee and its course is marked on the skin with iodine. With the patient in the horizontal position the leg is elevated and the blood massaged out of the saphena. Its trunk is then compressed in the fossa ovalis and the patient brought into an upright position. Two fingers of the free hand are placed on the iodine line, which corresponds to the invisible saphena. In cases of valvular incompetency there is a regurgitation of blood, the slightest variations of which are detected by the palpating finger as "rushing eddies" ("surrende Wirbelströme"). Frequently they may be heard with the stethoscope. In these cases sapheno-femoral anastomosis gives splendid permanent results. DRAUDT.

Guggenheim, H.: On Lymphogranulomatosis and Its Relation to Other Systematized Lesions of the Hæmoporetic System (De la lymphogranulomatose et de ces rapports avec les autres lésions systématisées de l'appareil hématoporetique). *Thèse de doct., Par., 1913.* By Journal de Chirurgie.

Guggenheim reports two cases of lymphogranulomatosis in which he made a bacteriological and an histological examination of the glands and blood. Bacteriologically his results were negative, as were all tests for tuberculosis and syphilis. There was a slight leucocytosis with a relative increase in polymorphonuclear cells.

The glands of the neck, axilla, and groin were examined microscopically. It was noted that the normal architecture of the gland was lost and had been replaced by a fibrous meshwork in which were found lymphocytes, plasma-cells, endothelial cells, and eosinophiles of lymphoid origin.

The first case was that of a woman, thirty years of age, who died from tracheo-bronchial adenopathy despite three operations and treatment with arsenic. The second was that of a woman of forty to whom some benefit had come from intensive treatment.

Guggenheim next reviews the cases of non-specific, non-leukæmic, non-tuberculous adenopathy reported during the last ten years and finds that the following terms are used somewhat indiscriminately by various

authors: Hodgkins' disease, Trousseau's adenitis, aleukæmic lymphoma, pseudoleukæmia, lymphosarcoma, lymphogranulomatosis, etc.

He believes that the condition which he describes as lymphogranulomatosis deserves a distinct place in a classification which includes also lymphosarcoma, a metastasis-forming, tissue-invading and destroying tumor, and the aleukæmic lymphocytoma of Vaquez, or pseudolykæmia of Pinkus, a condition in which there is a hyperplasia of the lymphoid cells, and the adenopathies of tuberculosis, syphilis, leprosy, etc.

JEAN CLUNET.

SURGICAL THERAPEUTICS

Beck, E. G.: The Present Status of Bismuth-Paste Treatment of Suppurative Sinuses and Empyema. *Tr. Internat. Cong. Med., Lond., 1913, Aug.* By Surg., Gynec. & Obst.

The author gives a resumé of his experience in treating 1100 cases with the bismuth-paste method in the past eight years, and summarizes the work of other surgeons in America and abroad. These reports represent a class of cases in which the use of bismuth paste was preceded by other treatment.

The author's own material consisted of surgical cases in which all other means of treatment, surgical, medical, etc., had been tried previously. Only six per cent were finally given up as hopeless. Many instructive cases are cited in which a well-planned operation, following a correct diagnosis by means of tracing the sinuses to the focus of the disease, was effective, or, when operation was not feasible, the sinuses were closed by merely the injection of the bismuth paste. The bismuth-paste treatment fails only when the technique is not carried out properly, when the instruments used cannot meet the essential requirement of filling all of the sinuses at once, and when foreign bodies, such as rubber tubing, the end of a probe, or sequestra, that should have been removed before the injection, are still present.

In the series of 1100 cases treated by the author and his brothers there were no fatalities from bismuth poisoning, due to the fact that the bismuth paste was applied properly. All fatalities from poisoning reported by others occurred during the first five years that the method was in use. No report of fatalities has been made in the last year although the bismuth-paste treatment has been used even more extensively than before.

Beck employs a ten per cent paste in cases of cold abscesses to prevent the formation of sinuses and obtains good results.

ELECTROLOGY

Cannon, W. B.: The Early Use of the Röntgen Ray in the Study of the Alimentary Canal. *Tr. Am. Röntg. Ray Soc., Boston, 1913, Oct.* By Surg., Gynec. & Obst.

After reviewing the earliest experiments to make manifest the contours of hollow organs, such as

arteries, by injecting metallic salts, the author gave an account of the first observations of the movements of the cesophagus and stomach as seen when food was mixed with subnitrate of bismuth and examined by means of the röntgen rays. Cannon maintains that the method now so widely used in examining the alimentary tract was developed gradually, and that there is little warrant for ascribing its invention to any one person.

Holland, C. T.: *The Statistics of the X-Ray Examination for Stone in the Urinary Tract.* *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

The author analyzes in detail the X-ray findings of 1707 cases, and discusses the various conditions shown by X-rays and the percentage of cases in which each was found. He considers also the question of differential diagnosis. Pelvic shadows other than those of stone occurred in the proportion of 1 in every 3.43 males and 1 in every 4 females; calcareous glands were noted in 1 in every 8 males and in 1 in every 6 females.

With regard to kidney and ureter stones, stress is laid on the necessity of a complete examination in all cases. A stone or stones were found in 402 out of 1603 patients examined, or once in every 4 cases. The stone was found on the right side 258 times, and on the left 200 times, the extra number being due to the fact that in many cases more than one stone occurred in the ureter or kidney of the same patient, sometimes on opposite sides.

The X-ray findings of stone were very few indeed, and it was sometimes difficult to determine whether the shadow found was really that of a stone or that of some other condition. Frequently small pure uric acid stones found to be present at the time of examination and passed later on were not noted in the X-ray examination.

Pure uric acid stones in a kidney or ureter must be extremely rare as none were found in any of the cases in which the kidney was operated upon after a negative X-ray examination. The number of operations following negative X-ray examinations was 85 and in almost all of these cases some other cause was found for the symptom.

Attention was called to the fact that a negative X-ray diagnosis does not necessarily mean that there are no stones in the bladder, for in 4 out of 104 cases in which bladder stones were found there was no X-ray shadow. In each of these four cases the stone was found on analysis to consist of pure uric acid and moisture.

Lazarus-Barlow, W. S.: *The Effect of Radio-Active Substances and Radiations Upon Normal and Pathological Tissues.* *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

There is much evidence that a destructive or injurious effect is exerted by radium and that this is bound up chiefly with the alpha rays. From the

laboratory point of view, evidence concerning the beta and gamma rays is less convincing, and in the case of the latter, the opinion is gaining ground that the clinical effects that have undoubtedly been noted depend upon the secondary beta rays to which gamma rays give rise on meeting with an obstructing substance. Doses of radiation less than those producing definite destructive effects produce an inhibition; thus, mouse cancer cells irradiated to a degree short of killing them grow more slowly on transplantation. It is evident that even smaller doses stimulate the growth of cells. This fact is of importance since the author has found small quantities of radium element in cancerous tissues and in gall-stones associated with cancer of the gall-bladder, whereas normal tissues and gall-stones not associated with cancer of the gall-bladder showed either no radium or traces on the verge of experimental error. Mottram had shown in his laboratory that cells in mitosis are about seven times as vulnerable to radium as cells in the resting stage.

Saubermann: *Progress of Radium-Therapy.* *Arch. Röntg. Ray*, 1913, xviii, 98.

By Surg., Gynec. & Obst.

In the light of present-day knowledge the indications for radium therapy are: (1) rheumatism of the joints and muscles, acute and chronic; (2) arthritis, subacute, chronic, deformative and gonorrhœal; (3) neuralgia, intercostal neuralgia, etc.; (4) sciatica, including inflammation of the nerve ends; (5) gout, uric acid diathesis; (6) tabes dorsalis, diminution of lightning pains; (7) catarrh of the antrum and frontal sinus; (8) arteriosclerosis; (9) blood diseases; (10) constipation; (11) diabetes and glycosuria; and (12) nephritis.

The beneficial clinical results in this varied list of diseases are due to physiological actions the existence of which can be proven in living organisms. Some of the experimental results demonstrate the following facts: (1) radium emanation promotes the growth and multiplication of healthy cells and the decay of morbid cells; (2) in man, the emanation produces diuresis; (3) radio-active water stimulates the digestive tract and produces catharsis; (4) the uric acid and urea content of the urine is markedly increased; (5) vaso-dilation is produced; (6) the viscosity of the blood is diminished; (7) the blood pressure is lowered, probably because of (5) and (6); (8) metabolism is increased, especially that of hydrocarbons; (9) digestion both in the stomach and in the intestines is rendered more active; (10) there is a nerve-soothing effect which may aid to check insomnia; (11) sexual activity is increased; (12) the effect on the blood is leucocytosis followed by leucopenia with increase in the number of the red corpuscles.

The cause for these physiological effects is not so easy to determine. There is reason to believe that they are due to an increase in the activity of body ferments. At least it is easy to prove experimentally that ferment action is greatly increased by the in-

fluence of radium, and as a working basis it is assumed that such is the action within the human body.

Radium increases the activity of ferments as would a catalytic agent, either starting chemical changes or hastening their action if already in progress. The result is increased oxidation of the products of metabolism. This oxidation in diabetics takes the place of oxidation by the normal ferments the function of which is said to be disturbed in diabetes, although it is true that the symptoms of neuritis have been aided by radium treatment more often than the glycosuria.

The results in nephritis, arterial changes, etc., also are explained as being the result of an increase in the ferment action caused by the radium. One of the facts upon which this conclusion is based is that in artificial nephritis, etc., the ferments are destroyed by the poisons that produce the disease.

HOLLIS E. POTTER.

Lange: Röntgenotherapy in Measured Massive Doses. *J. Am. M. Ass.*, 1913, lxi, 556.

By Surg., Gynec. & Obst.

Lange discusses the principles underlying the X-ray treatment of malignant growths and points out the importance of a measured dose by which the X-ray treatment is placed upon a rational biological basis. He states that the treatment of uterine myomas, climacteric hæmorrhage, and uterine cancer by the X-ray became successful only when the massive dose technique was adopted and use was made of an aluminum filter of 3 mm., and a compression band to exsanguinate and desensitize the skin.

By the massive dose technique it is possible to give four times the erythema dose at one exposure and in one series extending over several days, and to subject the same area of skin to from six to ten times the erythema dose without apparent injury. Also, by varying the area of the skin exposed, tremendous quantities of the Röntgen rays may be delivered to the deep tissues. The possibility of administering a measured massive dose is a *sine qua non* of successful röntgenotherapy.

HENRY SCHMITZ.

Abbe, R.: Radium in Malignant Disease. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The author stated that while universal testimony agrees that the vast majority of superficial, and some internal, cancers can be cured by radium, there are still some failures and they need to be explained. This explanation he has found in an experimental study of the growth of plants that had been exposed to radium at different distances and for different periods. He showed beautiful photographs of plant growth to prove that the close application of radium destroys life, but when the rays are within the range of half an inch to an inch and a half they excite and stimulate growth. Beyond that radius the so-called

gamma rays prevent growth. It is these that are the only ones that are of value in reducing malignant tumors.

It has been proved by the French that heavy lead plate will shut out the harmful rays and permit the useful gamma rays to go through slowly and to destroy malignant tumors.

However, by the new plan of "distance filtration," without lead plate, the same, or better, results are obtained in a quarter of the time, or less. The radium is held at a distance of one and a half inches and in this manner most of the undesirable rays are excluded.

The author showed also many illustrations of the wonders worked by radium—numerous cases of tumors on the vocal cords, which destroyed the singing and speaking voice and obstructed breathing, and which were cured by one strong application for thirty minutes; the tumors disappeared in eight weeks.

A remarkable illustration was that of a gentleman on whose very bald head had grown many malignant tumors for eight months. One application of radium by the new method of distance filtration caused their complete disappearance in twelve days.

Of interest also were illustrations of malignant destructive bone tumors cured with restoration of the bone by burying radium in them. The earliest case remains cured nine years after the treatment.

Abbe spoke enthusiastically of the great work of the British Radium Institute and of recent German work, the results of which have all been corroborated by his own experience.

Pusey, W. A.: What Can be Done in Cancer with Röntgen Rays? *J. Am. M. Ass.*, 1913, lxi, 552.

By Surg., Gynec. & Obst.

The author regrets the partial disrepute into which the X-ray method of treating cancer has fallen since the advent of a more general, and consequently haphazard, use of the rays. The present scepticism is no doubt largely a result of observations made upon cases treated with mediocre skill. In the hands of trained men the results obtained to-day from this method demand an even greater recognition than those obtained in the early days of great promise.

Epitheliomas, irrespective of type, may be symptomatically cured by röntgen rays if the subcutaneous tissues are not deeply involved and there are no metastases. Occasionally growths with deep extension, even those involving bone and regional lymph nodes, respond in a remarkable manner.

As a rule, those cases are to be chosen for röntgen-ray treatment in which there is no involvement of regional lymph glands. Such cases with proper treatment give results which compare favorably with those of any other method. When a good scar can be obtained, they are usually permanent.

Following surgical removal, the X-rays play an important rôle in preventing the recurrence of localized cancers near the surface. This is particu-

larly true of breast cancers in which dissemination has not taken place. The röntgen treatment is without avail in cancers of the deeper viscera or in cases where metastasis has occurred.

HOLLIS E. POTTER.

Holding, A. F.: The Röntgen Technique of Deep Therapy. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.
By Surg., Gynec. & Obst.

Holding stated that: (1) A review of the medical literature up to 1909 shows that there had been reported up to that time 3134 cases of malignant conditions treated by röntgen methods. The results varied more according to the röntgenologists' technique than according to the morphology of the tumor. (2) A review of the medical literature shows that in 667 cases of myoma treated by röntgen methods in which the end-results were known, 376 cases were cured and 208 were improved. Of 271 cases in which the end-results were known, 206 were reported cured, and 206 were improved. (3) Ashoff, Kronig, Gauss, Bumm, and Voight published conclusive reports as to the effects of deep röntgen therapy on carcinomas of the face, breast, rectum, uterus cervix, and vulva. Bumm and Voight used mesothorium in conjunction with the deep röntgen therapy.

A sufficient number of good results have been reported to compel the consideration of deep röntgen therapy by the leaders of the medical profession.

Measured massive doses with filters, and the use of the most penetrating rays give the most successful results. Unmeasured, fractional, "three-times-a-week" röntgen treatments are condemned.

A resumé of the essentials of the Gauss technique for the treatment of myomas, carcinomas, etc., was given as follows: (1) the use of hard tubes—Walter 6-8, Wehnelt 9-10; (2) the use of a filter of aluminum 3 mm. thick; (3) the use of a circuit breaker in the primary current so that 100 to 120 impulses per minute may be delivered to the tube; (4) the division of the skin over the site of the disease into small areas 2 cm. square and the treating of each area separately and only once in a series; (5) the administration to each area of skin of 15 X or one and one half times the erythema dose; (6) a "cross firing" of the rays so that the rays directed at different angles through different areas of skin converge at the site of the disease; (7) the directing of the rays toward the site of the disease from every angle from the front, back, sides, above and below; and (8) the administration of the treatment in series. A series consists of 300 to 550 X administered on one or two days. This is followed by an interval of about 18 or 22 days, at the end of which time another series is administered. In myoma cases five to six series are commonly used.

In gynecological cases, patients were treated for one or two days at intervals of eighteen to twenty-four days, covering a period of sixty to one hundred days. Amenorrhœa was obtained within one month after treatment was begun.

The utilization of the Gauss technique will be more readily accepted for inoperable malignant conditions than for gynecological conditions. As to whether it should be used in the latter field must be determined by the gynecologist. The duration of the treatments seems to be needlessly tedious. They can be greatly shortened by increasing the size of the areas of the skin that are treated at one time.

The publication of brilliant results with such enormous dosages given by Gauss was liable to dangerously stimulate the widespread treatment of disease by men who do not measure their dosages of X-rays. "The slogan of success in röntgen therapy is the same as that of any specialty technique."

MILITARY AND NAVAL SURGERY

Wolf, W.: Periostitis from Over-Exertion and Spontaneous Fractures in the Army (Über Anstrengungsperiostitis und Spontanfrakturen in der Armee). *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, 548.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Periostitis from over-exertion occurs only in the lower extremities, on the inner surface of the tibia and the femur. Soldiers complaining of pains in the femur were often accused of simulating because a periostitis could not be diagnosed on account of the thickness of the soft parts of the thigh. To-day the röntgen examination explains such cases.

The author reports the case of a soldier who complained repeatedly after long marches of pains in both thighs. Examination yielded no objective findings. The röntgen examination, however, revealed periostitic stratifications on the inner side of the femur.

Chronic inflammation of the periosteum causes defective nutrition in the bones which results in abnormal brittleness. Periostitis from over-exertion is therefore an important factor in the frequency of spontaneous fractures of the lower extremities in the army. The author reports in detail also a case in which a suspected fracture from periostitis was ascertained by the X-ray.

SIMON.

Stierlin and Vischer: Experiences with the Mastisol Bandage in the Servian-Turkish War (Erfahrungen mit dem Mastisolverband im serbisch-türkischen Krieg). *Cor.-Bl. f. schweiz. Ärzte*, 1913, xliii, 688.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Stierlin and Vischer were active in the reserve hospital at Belgrade and in a field hospital at Monastir at the battle of Monastir. At these places they used aseptic vioform gauze directly on the wounds, sealed it with mastix solution and put an ordinary piece of bandage over it. Infection was prevented by this method, even during transportation of the wounded. The severely lacerated and crushed wounds were dressed with ordinary gauze. Much time and material were saved by employing the mastisol bandage. Their solution consisted of 40 gm. mastix, 100 gm. benzol and 40 drops of linseed oil.

GEORG SCHMIDT.

GYNECOLOGY

UTERUS

Kelly, H. A., and Neel, J. C.: **Carcinoma of the Cervix of the Uterus.** *Bull. Johns Hopkins Hosp.*, 1913, xxiv, 231.
By Surg., Gynec. & Obst.

This article deals with the ultimate results, as far as they could be obtained, of all cases of carcinoma of the cervix observed in the gynecological clinic of the Johns Hopkins Hospital from 1900 to 1911—137 cases in all. A resumé is given of the clinical history, treatment, findings at operation, primary mortality, late results, and absolute accomplishment.

The authors draw the following conclusions:

1. The extensive abdominal removal of all uterine cervical carcinomata is justified where there is any hope of complete excision, unless there is some special contra-indication to surgical interference. This operation, if properly performed, has given, notwithstanding the high primary mortality, the greatest percentage of permanent cures of any therapeutic measure thus far suggested.

2. An exploratory operation is often necessary to determine whether or not a case is operable.

3. Obesity is not necessarily a contra-indication to the operation, since the wide horizontal lipectomy decreases the depth of the field of operation.

4. The preliminary catheterization of the ureters is a valuable aid, especially in fat patients, and does not necessarily increase the probability of fistulae and secondary infection of the urinary tract.

5. Decreased cervical mobility is sometimes due to a secondary inflammatory reaction and may be improved by cauterization of the primary growth.

6. Preliminary cauterization and disinfection of the primary growth are advisable in all cases.

7. Extensive glandular dissection is not justified, since the increase in permanent cures does not compensate for the rise in the percentage of the primary mortality.

8. By improvements in the technique of the operation, the primary mortality has been decreased from 28.5 per cent for the first seven years to 11.5 per cent for the last five years. Further simplification and perfection of the details of this operation may yet reduce the primary mortality to nearly that of the ordinary laparotomy and make it more generally available.

Aside from the discovery of the etiological factor of carcinoma of the cervix of the uterus and its successful elimination, the greatest hope lies in the early recognition of the primary growth. This can be accomplished only by a more thorough training of the family physician as to the symptoms and signs of cancer and by a systematic education of the laity.

GEORGE E. BEILBY.

Klein, G.: **Results Obtained with X-Ray Treatment of Carcinoma of the Uterus, Ovaries, and Mammæ** (Erfolge der Röntgenbehandlung bei Carcinom des Uterus, der Ovarien und der Mamma). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

From 1904 to 1907 the author treated six cases of carcinoma of the uterus with the X-rays. The principal results were that the tumors were prevented from spreading and the pains and decomposition decreased during the treatment. The connective tissue surrounding the tumor became firmer and acted as a wall through which the tumor did not spread. With improved apparatus and technique the author induced Drs. Hirsch and Monheim of the Munich polyclinic to treat with X-rays nine patients suffering from inoperable cervix involvement, and twelve patients in whom the carcinomatous uterus had been extirpated, a total of 21 cases. One patient had a Wertheim operation performed in January, 1912, and has had two vaginal recurrences which were excoriated and cauterized. As a result of prolonged X-ray treatment she is now probably free of any recurrence. This is the only case of this kind known to the author. There is no proof that the cure effected is permanent, but at any rate the result is excellent. Those cases which have been operated upon previously are especially adapted for the X-ray treatment, as all carcinomatous rests can be destroyed much more easily than large inoperable tumors. Probably the effect is due to the destruction of the carcinoma organism, as the result of which the surrounding tissue infiltrated with leucocytes is rendered capable of taking care of the tumor rests that remain. Of particular interest was a case of an adenocarcinoma of the breast. The author amputated the breast in 1907, and removed the recurring nodules in 1909, 1910, and 1911. The scar, meanwhile, was treated with X-rays and the last nodule, extirpated in 1912, showed no carcinomatous tissue. In 1913, five and three quarter years after the amputation the patient was still free from recurrences. The results were good also in operable and inoperable ovarian adenomas and carcinomas. In all cases the growth was checked, ascites formed much less frequently, and the tumors became more firm.

Pinkuss, A.: **The Results of Mesothorium Treatment in Carcinoma** (Über die Erfolge der Mesothoriumbestrahlung bei Carcinom). *Berl. klin. Wchnschr.*, 1913, I, 1105.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Since September, 1911, the author has treated twenty-two cases of genital carcinoma successfully

with mesothorium. The activity of 88 mg. radium bromide proved to be sufficient when the treatment was repeated frequently, and this amount minimized the danger of injuring neighboring parts. After prolonged exposure the surface cancer cells become degenerated, but deep-lying nodules were not influenced and metastasis was not prevented.

Success depends upon the degree of the malignancy of the cancer, the general constitution of the patient and his tendency to become cured. Frequently cessation of the growth was produced by mesothorium, but later more rapid extension occurred. Abdominal exposure demands great care and experience. Tumors lying near the abdominal wall are difficult to influence. Vaginal treatment is much more simple, but in this case the great danger lies in producing injury to neighboring organs, the bladder, the ureter, the bowel, and the uterine artery. All operable cases upon which for some reason operation cannot be performed are adapted to this treatment as well as inoperable cases or recurrences. Radical operations, followed by prophylactic exposure to mesothorium is especially to be advised. Mesothorium combined with the deep penetrating X-rays and intravenous atoxyl injections, is excellent.

MONHEIM.

Gunakoff, L.: The Question of Cystic Degeneration of Uterine Myomas (Zur Frage der cystischen Degeneration der Uterusmyome). *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 715.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient was a woman 39 years of age. She had had one spontaneous delivery and one abortion. For over a year the menses were regular yet much more profuse than before, and she complained of general weakness. For several months hæmorrhage persisted without ceasing, the abdomen became enlarged, and the general weakness increased. Examination showed a tumor arising from the uterus or the ovary. At operation an elastic tumor the size of a child's head was found. It was multilobular and excentrically developed and was situated in the mesometrium on the right uterine wall. The patient recovered.

Examination of the tumor showed it to be a myoma with cystic degeneration. Microscopically the tumor tissue was different from the smooth musculature of the uterus. It consisted of cells with round or oval nuclei and the stroma was poorly developed. Several places still showed isolated strands of smooth muscle fibers and connective tissue bundles.

The cause of the degeneration was poor nutrition, such as occurs in thin-pediced, subserous, or intraligamentous myomas. The symptoms of such degeneration are not constant. According to Winter, severe hæmorrhage occurs in 74 per cent of the cases. The growth is not rapid. Hæmorrhage, enlargement of the abdomen, general weakness, and the danger of sarcomatous degeneration are indications for operation.

GINSBURG.

Langes: Experiences with the X-Ray in the Treatment of Myomas and Metropathies (Erfahrungen mit der Röntgenbehandlung bei Myomen und Metropathien). *München. med. Wchnschr.*, 1913, lx, 1740.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Twenty-four cases of uterine myomas and fifty cases of hæmorrhagic metropathies were treated with the X-ray. The technique at first was that of Albers-Schönberg. Later, 3 to 4 mm. aluminum filters were employed, and three fields in the lower abdomen and in the sacral region were exposed. In severe cases the perineal and vaginal fields were radiated, a lead glass tube being employed for the vaginal application.

No severe injuries were observed, but skin pigmentation was frequent. "Intoxication" phenomena were extremely mild. There was no diarrhoea and symptoms of ovarian insufficiency were not marked. Of the fifteen cases of myomas carefully observed, eight resulted in amenorrhoea, six in oligomenorrhoea, all of these fourteen showing definite retrogression of the tumor. The fifteenth case resulted in failure due to imperfect technique. Of the thirty-nine cases of metropathies, thirty-four resulted in amenorrhoea, nine in oligomenorrhoea, six remained unchanged, and one was aggravated so that a vaginal total hysterectomy had to be performed. All of the seven failures must be attributed to the insufficiently developed technique that was employed at first. With the present technique no failures have occurred. Improvement began after two or three series of exposures.

RUNGE.

Pinkuss, A.: Mesothorium in the Treatment of Hæmorrhagic Metropathies and Myomas (Die Mesothoriumbehandlung bei hæmorrhagischen Metropathien und Myomen). *Deutsche. med. Wchnschr.*, 1913, xxxix, 1041.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The mesothorium treatment of hæmorrhagic metropathies and of hæmorrhages due to myomas is a valuable addition to our therapy. Similar to the action of the X-rays, the hard rays of mesothorium produce a gradual atrophy and sclerosis of the ovarian tissue and therefore, indirectly, an oligomenorrhoea or an amenorrhoea. A direct influence upon the uterine wall or upon the tumor has not been demonstrated and is not essential.

The method of applying the treatment is of advantage to the physician as well as to the patient; the mesothorium is placed into the vagina in little capsules and exerts its influence upon the ovaries from there. The author has not employed the intra-uterine application, as with that method the rays must first penetrate the uterine wall and consequently are weakened. Furthermore, he does not consider a direct effect upon the uterus and tumor necessary.

The treatment is indicated in those cases in which no improvement follows curettement and cauterization. Malignant degeneration of course must be

excluded by a careful histological examination. Patients approaching the menopause (30 years of age and upwards) are the best subjects since the reproductive functions are injured. The symptoms incident to ovarian atrophy are about the same as those that occur after operative castration, and are mild. The author believes that this new method will supplant operative procedures. HARF.

Bukojemsky, F. W.: Uterine Sclerosis, Arteriosclerosis Uteri, and Its Relation to Uterine Hæmorrhage (Die Gebärmutter-sklerose, Ateriosclerosis uteri, und deren Zusammenhang mit den Uterus-blutungen). *Arch. f. Gynäk.*, 1913, xcix, 463.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author discusses the difference between infectious metritis and sclerosis uteri, both of which may cause profuse metrorrhagia and are characterized by abnormal enlargement of the body of the uterus. In infectious metritis, however, the inflammatory process is seen chiefly in the uterine tissue without participation of the blood vessels, while in sclerosis, the periarterial processes are involved. In the history of the cases, hereditary signs of chronic arthritis, rheumatism, etc., and past infections are met with. In uterine sclerosis special attention must be paid to the condition of the blood vessels, which show arteriosclerotic changes in typical form, and to the changes and diminution in the quantity of the elastic structures of both the uterus and the blood vessels.

The dependence of uterine hæmorrhage upon arteriosclerosis uteri has not been generally recognized, but the majority of the investigators are of the opinion that the changes in the vessels play the chief rôle. Differences of opinion still exist as to the condition of the elastic tissue in arteriosclerosis. All investigators, however, agree that it increases in amount. A minute description of three cases observed by the author is given. In these the uterus was extirpated on account of uncontrollable hæmorrhages. In all three cases the typical picture of the so-called sclerosis uteri or its vessels were found and also necrosis of the vessel walls. The author considers the hæmorrhage a result of the changes in the vessels due to the disappearance of the elastic elements in their walls. MARKUS.

Ziegenspeck: Chronic Parametritis and Displacements (Parametritis chronica und Lageveränderungen). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Ziegenspeck expresses himself as opposed to the view recently expressed that there is no such thing as parametritis chronica and that such conditions are really due to chronic peritonitis. He points to the parametritis acuta puerparalis of Virchow which frequently develops into the chronic form. He mentions also the work of König, Rosthorn, Freund, and his own work, and refers further to the older points in the differential diagnosis between para-

metris chronica and peritonitis mentioned by Schulze. To the latter he adds three new points: (1) an apparent downward bulging of the vaginal vault on the affected side; (2) a movability of the fixed uterus in the direction of the diameter of the pelvis in parametritis, whereas in chronic peritonitis the movability is more in the direction of segments of a circle, and (3) the fact that the parametric induration can be seen with the aid of a grooved speculum.

In regard to treatment, ventrofixation according to the method of Broese is too uncertain and too formidable a procedure. Fränkel proposed lengthening the fold of Douglas by implanting into it peritoneum from the omentum. To cure an induration of connective tissue he does the same thing as is done when a piece of skin is implanted for the correction of Dupuytren's contraction of the palmar aponeurosis. Massage and stretching is etiologically the correct method and cure results in a short time.

Rusoakova-Snowitsch, A. A.: Mud and Mineral Baths during Menstruation (Schlamm- und Mineralbäder während der Menstruation). *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, xxviii, 783.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports the results of the employment of warm and hot baths in 110 cases during menstruation. Eighty were cases of dysmenorrhœa. Her conclusions are as follows:

1. Mud baths, warm or hot, regulate the bleeding. The duration of the period is not influenced very much, and is shortened rather than prolonged.
2. The pains either cease entirely or are much decreased.
3. The general condition is not influenced unfavorably.

According to Strassburger, the favorable influence exerted by the baths is due to the fact that they irritate the skin and in this way produce a contraction of the peripheral blood vessels. The contraction soon disappears and is followed by a dilatation of the blood vessels of the skin and a contraction of the vessels of the internal organs. GINSBURG.

Sweeny, T. T.: Leukoplakia Uteri. *Am. J. Obst.*, N. Y., 1913, lxviii, 243. By Surg., Gynec. & Obst.

The author reports in detail a rare case of leukoplakia of the cervix, giving the history and the pathology, and gross and microscopical drawings. He also reviews the subject with reference to the eight cases that have been previously reported in the literature. He draws attention to the tendency of leukoplakia to cancerous change and in cases of leukoplakia of the cervix, advises early and complete excision of the affected area. N. SPROAT HEANEY.

Rieck, A.: The Indications for and Technique of Defundatio Uteri (Zur Begründung und Technik der Defundatio uteri). *Frauenarzt*, 1913, xxviii, 242. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Oblique resection of the body of the uterus is an operation for the relief of profuse menstrual periods

and is called defundatio uteri. The author emphasizes his priority in devising the operation. The advantages of this procedure over that of total extirpation are: (1) the much shorter time necessary to perform it, 20 to 45 minutes, and (2) the much simpler technique. The size of the uterus, adhesions, and even pyosalpinx, need not contra-indicate it. The extraperitoneal method is to be preferred. By it peritoneal irritation and the other disturbances that follow total extirpation are avoided. The stump into which but few ligatures are placed causes no peritoneal irritation, but suppurative or fetid inflammation of the extraperitoneal wound does occur. The principal advantage lies in the fact that menstruation is maintained whereas in total extirpation amenorrhoea ensues. Uninterrupted recovery is the rule. SCHROEDER.

ADNEXAL AND PERIUTERINE CONDITIONS

Heimann, F.: The Internal Secretion of the Ovaries and Its Relation to the Lymphocytes (Innersekretorische Funktion der Ovarien und ihre Beziehungen zu den Lymphocyten). *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 538.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The thymus has the power to increase, and the ovaries, the power to decrease the number of lymphocytes. An increased internal secretion of the ovaries leads to a decrease in the number of lymphocytes, and a diminished secretion, to an increase in the lymphocytes. Heimann determined that in the intermenstruum the normal number of small lymphocytes is from 18 to 22 per cent and that during menstruation the number is considerably increased. An increased number of lymphocytes is found also in processes which cause hypoplasia, or a disturbed function, of the ovaries, such as amenorrhoea and the climacterium. However, after the menopause has existed for some time a decrease is noted. Cases of inflammatory adnexal disease which are accompanied by fever can not be used in these investigations. In afebrile adnexal disease, the number of lymphocytes decreases, and in ovarian tumors it increases. The number can be markedly lowered by the use of ovarian extract. BONDY.

Kloss, H.: A Case of Sarcoma Developing Within a Teratoma of the Ovary with Metastases in the Great Omentum (Ein Fall eines in einem Teratom des Ovariums entstandenen Sarkoms mit sarkomatöser Metastase im grossen Netz). *Zentralbl. f. allg. Pathol. u. pathol. Anat.*, 1913, xxiv, 482.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Most of the sarcomas involving ovarian teratomas have originated within the ovary and invaded the teratoma secondarily. Sarcomas developing within a teratoma are of much rarer occurrence.

The author reports a case belonging to the latter class. The tumor was the size of a child's head and consisted of a unilocular cyst inside of which at four different places little tumor nodules were developing. The metastatic tumor found in the omen-

tum was the size of a man's head, firm and solid. Microscopically the walls of the cyst showed the picture of a genuine teratoma, and the isolated nodules, the picture of a spindle-celled sarcoma. The metastatic tumor showed the same structure as the primary tumors. EBELER.

Ulesko-Strogonoff: Carcinomatous Degeneration of Ovarian Cysts (Zur Frage der carcinomatösen Degeneration vom Ovarialcystom). *Russk. Vrach.*, St. Petersburg, 1913, xii, 604.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

During the last four years two hundred and two ovarian tumors have been operated upon in the Gynecological-Obstetrical Institute of St. Petersburg. Ten were solid tumors and one hundred and ninety-two were cystic tumors. Of the latter, eighty-six were simple cysts, thirty-one, cystic embryomas, fifty-three, proliferating cysts, and twenty-two carcinomatously degenerated cysts. Thirty-three of the proliferating cysts were glandular, and twenty, papillary. In the opinion of the author, the carcinomatously degenerated cysts originated from the proliferating cysts.

From his examinations of these cysts the author draws the following conclusions: (1) Proliferating cystic tumors are transitional forms between benign tumors and tumors undergoing carcinomatous degeneration; (2) the epithelial hyperplasia which characterizes these forms shows this tendency toward malignant degeneration; (3) the relation of the proliferating cystic tumors to the malignant cystic tumors proves the origin of the latter; (4) in the cysts showing carcinomatous degeneration, proofs are evident that they have developed from pre-existing proliferating cysts. BRAUDE.

Baisch: The Removal of Blood from the Peritoneal Cavity Following Rupture of the Tube (Zur Behandlung des bei Tubenruptur in die Bauchhöhle ergossenen Blutes). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 714.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Baisch recommends the complete removal of all blood from the peritoneal cavity in cases of hæmorrhage following a rupture of the tube. It should be allowed to remain only in those cases in which the patient's condition demands a hurried operation. He considers the presence of blood in the peritoneal cavity as an added factor in the development of peritonitis, since blood is an excellent culture medium. It aggravates the subjective symptoms during convalescence and increases the danger of post-operative adhesions. ZINSSER.

Hannes, W.: Affections of the Adnexa: Inflammations and Tubal Pregnancy (Die Adnexerkrankungen: Entzündungen und Eileiterschwangerschaft). *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 609.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This article is based upon observations made at the gynecological clinic in Breslau. As causes of

the inflammations of the adnexa were found the gonococcus, streptococcus, staphylococcus, diplococcus lanciolatus, bacterium coli, bacillus typhosus, the tubercle bacillus, actinomyces, and Friedlander's bacillus. Fifty per cent of the cases were due to the gonococcus and only four and one half per cent to the tubercle bacillus. Hannes believes that when adnexal inflammation is accompanied by appendicitis the latter is secondary to, and not the cause of, the former. According to the pathological anatomy he classifies adnexal inflammations into two large groups: (1) Those with exudate formation in the lumen of the tube and the formation of lactosalpinx. (2) Those with peritubal inflammation and the formation of numerous adhesions. The latter form is often only a late stage of the former.

In discussing the diagnosis the author recommends puncture of the pouch of Douglas, but this should be done only when there is no suspicion of the presence of tuberculosis. The preparation of a gonococcus vaccine he expects will be of great value in the differential diagnosis. The local reaction following the injection of old tuberculin is also of great diagnostic value. He discards and advises against curettement for diagnostic purposes as non-tuberculous affections of the adnexa may react violently to such procedure.

Hannes believes with Küstner that fresh inflammatory conditions are a *noli tangere* for operative interference and that the later a chronic inflammatory condition is attacked surgically, the more conservative need the operation be, and the better and more permanent the results. After nine to twelve months a closed sactosalpinx will have become sterile. If the conditions demand an interference during the acute stage the abdominal route is to be preferred, as it permits a more conservative operation. The author attributes particular value to the V-shaped excision of the uterine ends of the tube and careful suture of the same in case the uterus can be saved; in other cases, and when there is much adhesion, the methods of Faure, Kelley, and Beuttner, with previous hemisection of the uterus, greatly facilitate the resection of the adnexa from this point. For drainage purposes, which is indicated only in tuberculosis, the author employs the tampon through the lower angle of the abdominal wall in cases in which the presence of infectious pus is suspected, or in which oozing takes place. In cases in which the fimbrial extremity is closed only by the formation of adhesions around the tube, he advises the salpingostomatoplastic operation to permit the possibility of a later pregnancy.

In discussing tubal pregnancy the author advises the employment of puncture of the pouch of Douglas for the differential diagnosis of hæmatocele and perforative appendicitis. In cases of internal hæmorrhage he advises immediate laparotomy, even in collapse, with careful removal of all blood. Even if there is no internal hæmorrhage, he

recommends operative treatment in all cases of unruptured tubal pregnancy, in ruptured pregnancy, and in hæmatocele in which there is recurrent hæmorrhage and in suppurative hæmatocele. The resection of the other tube to prevent a recurrence of ectopic pregnancy is not deemed justifiable; on the contrary he advises the salpingostomatoplastic procedure on this tube also, that a later uterine pregnancy may be possible.

VASSMER.

EXTERNAL GENITALIA

Bondy, O.: Vaginal Bacteria and Endogenous Infection (Scheidenkeime und endogene Infektion). *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 604.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author attacks principally the views of Bumm and Sigwart in regard to endogenous infections. A strict separation of the germs of the external genitalia from those of the vagina is impossible. He disputes the statement that saprophytes are not to be found in women who have not been subjected to vaginal examination. He does not recognize the teachings of Bumm and Sigwart concerning the apathogenity of the vaginal streptococci on account of their defective animal virulence. The question of self-sterilization of the vagina should be entirely dropped, for as soon as the endogenous infection commences during labor, at the time of the rupture of the amniotic sac the power of self-disinfection of the vagina ceases on account of the changed composition of the vaginal secretion.

BENTIN.

Jack, W. R.: Vaccine Therapy in the Treatment of Gonococcal Vulvo-Vaginitis. *Glasgow M. J.*, 1913, lxxx, 84.

By Surg., Gynec. & Obst.

In the cases treated by the author the results obtained were as follows: A cure was effected in three cases, in the first two after two and a half months of treatment, and in the third, after over three months of treatment. In another three cases the condition remained uncured, in one case after two months of treatment, in another after five months, and in the third after more than five months.

The results in this short series were disappointing although there was a marked lessening of the discharge and a freedom from the irritation which is often found when vaccines are not used. The very favorable reports which have been given by some authorities have not been corroborated by other investigators. In the Vanderbilt clinic two hundred and sixty cases were treated by the irrigation method and eighty cases by vaccines. The percentage of recoveries was sixty with the former method and ninety with the latter. The time required for cure was 10.1 months with the irrigation method, and 1.7 months with the vaccine method. These statistics are very encouraging, but the author hesitates to accept them, since other authorities give no such

encouraging reports. The most that the author claims for the vaccine treatment in cases of vulvovaginitis in children is that it causes a marked amelioration of the symptoms and a lessening of the discharge.

J. H. SKILES.

Hofmann, O.: The Iodine Treatment of Gonorrhœa in the Female. *Interst. M. J.*, 1913, xx, 733. By Surg., Gynec. & Obst.

In the acute cases a smear is made from Skeen's glands and the urethra, and several from the vagina and the vulvo-vaginal glands. When the cause of the infection is found the labia are separated and the parts exposed swabbed with a solution of 3.5 per cent iodine crystals in 95 per cent alcohol. Next, a few drops of the solution are injected into Skeen's glands and the vulvo-vaginal glands by means of a hypodermic syringe with a blunt needle. The vagina is then swabbed with the patient in the Sim's position and with the aid of a Sim's speculum. A strip of gauze is next introduced.

In protracted cases in which the cervix and uterus are involved, the cervix is first painted and then a drachm of the iodine solution is injected under low pressure into the uterine cavity. This is repeated four or five times every three days.

In all cases copious hot douches are given, followed by a 1:5000 permanganate solution. The bowels are kept open by catharsis. Tea, coffee, and alcohol are forbidden.

EUGENE CARY.

MISCELLANEOUS

Cullen, T. S.: Address in Gynecology. *Canad. M. Ass. J.*, 1913, iii, 658. By Surg., Gynec. & Obst.

The author presented this paper to urge the medical profession to bring before the laity the necessity of an early operation in cancer. That the campaign which has already been started has yielded results is shown by the communications the author has received from different surgeons. He states that it is the duty of the medical profession to impress upon the laity the fact that cancer is a local process which can be cured if taken early enough. He believes that the same change of attitude can be brought about in regard to cancer as obtains now in regard to appendicitis. Twenty years ago it was difficult to persuade a person to be operated for appendicitis. To-day, when the diagnosis has been made, the first question is, "To what hospital shall I go?"

The author next discusses the diagnosis of cancer of the skin, lip, tongue, stomach, intestine, rectum, breast, and uterus, touching upon them lightly. He quotes two cases in detail of myomata of the uterus with adenomyoma of the cervix and rectum, associated with rectal adhesions and adenoma of the left broad ligament intimately connected with the rectum.

He urges the practitioner to become well informed in regard to the pathological and anatomical structure of the part affected, so that it will be possible for him to know the paths along which the cancer

usually travels. It would be folly to operate a case of cancer of the rectum if the liver were involved.

Cullen further urges that hospitals become more business-like in their methods; also that cases be followed so that the result of the cancer operations can be definitely known. He suggests that a special clerk be assigned to follow up cases of this kind and report the results of the operations.

EDWARD L. CORNELL.

Pfahler, G. E.: Röntgenotherapy in Gynecology. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct.

By Surg., Gynec. & Obst.

Röntgenotherapy in gynecology is now recognized as a valuable factor in the treatment of uterine fibroids, uterine hæmorrhage of metropathic origin, and a number of other affections to a lesser extent.

The author's experience in the treatment of fibroids, limited to 27 cases, extended over a period of ten years. The greater number of cases occurred during the past seven years. The results were most satisfactory in that a menopause was produced, the hæmorrhages were controlled, and the tumor gradually disappeared. In some instances the tumor continued to disappear long after the treatment had been stopped.

The treatments were given in series, each series involving a full dose administered through four different areas of the skin. When circumstances demand it, these four areas can be treated either in one day, or on four different days. The treatment is then not repeated until three weeks have elapsed. A cure usually requires from four to six such series of treatments.

The following conclusions were drawn:

1. Röntgenotherapy is the method of choice for hæmorrhage in patients approaching the menopause in whom carcinoma can be eliminated.
2. It is not the method of choice in patients under forty years of age.
3. It can be recommended in all cases of any age in which operation is contra-indicated.
4. For the differential diagnosis, in order to determine the indications for this treatment, special skill in gynecology is required; and for the proper administration of the rays, special training in röntgen technique is necessary. It is possible for a gynecologist to become a röntgenologist; it is also possible for a röntgenologist to become a gynecologist, but it is very unlikely that either one will master both. Therefore, the author believes that each case should be examined by a gynecologist and treated by a röntgenologist.

Heinsius, F.: The Cystoscopical Diagnosis of a Ureteral Calculus and the Removal of It by the Vaginal Route (Über die cystoskopische Diagnose eines Uretersteins und seine Entfernung auf vaginalem Wege). *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 441.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In a 47-year-old female patient, who was taken ill with right-sided colic and chills, a calculus in the

lower portion of the ureter was diagnosed by means of cystoscopic examination. The stone was removed by the vaginal route by exposing the ureter in the left parametrium and incising it. Uninterrupted recovery resulted.

BOXER.

Squier, J. B.: The Modern Diagnosis and Treatment of Gynecological and Obstetrical Patients with Syphilis. *N. Y. M. J.*, 1913, xcvi, 357.
By Surg., Gynec. & Obst.

The author dwells upon the biological diagnosis of syphilis in gynecological and obstetrical patients by the complement fixation and luetin skin reactions and provocative salvarsan administration. The consideration of greatest importance is the experience and dependability of the biologist who conducts the tests. The value of clinical evidence as well as the worth of diagnostic treatment should not be lost sight of when such evidence conflicts with laboratory tests. Treatment should be initiated as soon as a diagnosis has been made. Squier uses neosalvarsan almost entirely.

Neosalvarsan has the following advantages in comparison with salvarsan: (1) It is more simple to prepare; (2) it minimizes the number of preparation ingredients, thereby reducing the possibility of faulty technique; (3) it does not require as large a volume of fluid for injection.

Conditions necessitating caution in the administration of neosalvarsan are chronic alcoholism, myocarditis, arteriosclerosis, and lesions of the cerebrospinal system. The neosalvarsan medication is supplemented with an intensive mercurial treatment continued in earlier cases from six months to a year, and in later cases for a somewhat longer period.

The author sums up his conclusions as follows: (1) Treatment should be begun the moment diagnosis is certain; (2) to insure success it must be as intensive as regards the administration of both arsenic and mercury as the history of the case and the patient's physical condition will warrant; (3) under no circumstances should the physician attempt to treat a disease of such widespread effect and sinister influence without having given much study to the present conception of the management of the disease.

HENRY SCHMITZ.

Sigwart, W.: Bacteriological Control of Asepsis During Gynecological Laparotomies (Die bakteriologische Kontrolle der Asepsis bei gynäkologischen Laparotomien). *Arch. f. Gynäk.*, 1913, xcix, 284.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The bacteriological control was extended at Bumm's clinic so that not only a bouillon culture was used in the "three-sponge test," but the number of germs present was approximately determined by cultures on agar plates. This control was carried out in 114 major abdominal operations. In 86 per cent of the aseptic operations the bacterial content was small. Streptococci were found only twice; air

bacteria in all other cases. Numerous germs were always obtained from septic operations, the staphylococcus albus and aureus and the bacillus coli predominating. Streptococci were found twenty-three times in seventy-one cases. This difference was plainly marked in the healing of the wound. Not a single disturbance in the course of healing was observed in spite of the presence of streptococci. A positive prognosis as to wound repair cannot be made from the bacteriological findings at the time of operation. The investigations, however, justify the conclusion that the healthy peritoneum accommodates itself to a relatively large number of weak virulent germs. Connective tissue wounds must be carefully dried from blood, all bleeding and oozing must be arrested, and all wounds must be carefully covered with healthy peritoneum, the visceral coat being used eventually for this purpose.

LHOTZKY.

Jellett, H.: The Surgical Treatment of Pelvic Thrombosis of Septic Origin. *Surg., Gynec. & Obst.*, 1913, xvii, 147.
By Surg., Gynec. & Obst.

The treatment of puerperal pyæmia is of such importance that any procedure that offers any hope of an improved mortality rate is worthy of consideration. The author, having seen in the post-mortem room apparently operable cases of pelvic thrombosis the result of pyæmia, decided to operate on similar cases in future. In the article he records three cases of this kind in all of which the initial history was characterized by recurrent rigors, high temperature, and rapid pulse.

In the first case, on the fifteenth day a swelling was found in the right broad ligament. He opened the abdomen and removed a large thrombosed and suppurating ovarian vein, round which was a considerable amount of cellulitis. The patient rapidly improved.

In the second case he did not operate until the thirty-ninth day, as owing to absence from the hospital, he had not seen the patient before. In this case he removed a tense, cord-like structure, which turned out to be a thrombosed ovarian artery, and he also removed the ovarian vein, which contained a small thrombus in its lower part. The patient had a few rigors after the operation, but they disappeared, and her temperature fell to normal and remained so.

In the third case a very similar condition to that met with in the first was found at operation, except that it had gone much further. Septic peritonitis was on the point of starting, the whole length of the ovarian vein contained pus, and there were two abscesses beside the vein. The patient improved for a few days after the operation, then gradually lapsed, until on the thirteenth day after confinement she was as bad as before the operation. A hysterectomy was performed. The patient improved temporarily, but rapidly became again seriously ill, and died on the thirty-fifth day with symptoms of septic involvement of the lungs.

The author describes also two cases of pyæmia without obvious thrombosis. In the first case he performed a hysterectomy but without benefiting the patient. In the second case he tied the ovarian veins, and recovery began at once and continued.

In conclusion, the author refers to the interesting fact that in all of his cases the thrombosis was on the right side, and primarily in the ovarian vein alone. He considers that such cases always call for operation, and that it should be performed as early as possible to anticipate conditions such as were found in the third case. He considers that the diagnosis is the important point, and that, as a rule, it can be made from the symptoms of the patient, taken in connection with a thickening or swelling in the broad ligaments or along the course of the veins not accompanied by much pain.

Lampé: Basedow's Disease and the Genital Organs (Basdowsche Krankheit und Genitale). *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

It is evident from the literature and the reports of Frankl and Graff that there are clinical facts which indicate relations between Basedow's disease and the genital organs. Next to the disturbances in menstruation, it is the hypoplastic changes of the genitalia in exophthalmic goiter that are of chief interest to the investigator, and that are interpreted as indicating a decrease in the functioning of the ovaries. Particularly in permanent ovarian hypoplasia we do not know whether there is really a hypofunction, an afuction, or even a dysfunction of the ovary, for the anatomical character of an organ does not permit of a conclusion as to its function. For this reason also the belief in the existence of a relation between Basedow's disease and the ovaries based merely on the clinical facts above mentioned would for a long time have remained mere theory if we had not acquired a method by which we may obtain an insight into these complicated relations and determine an existing ovarian dysfunction positively. This method is Abderhalden's protective ferment reaction, and the theory upon which it is based is as follows: If, in Basedow's disease, the activity of the ovary is qualitatively disturbed, i. e., if the ovary gives off an abnormal substance into the blood stream, the organism as a whole should react to this product of dysfunction, which is foreign to the blood, by producing protective ferments against it. These ferments ought to be detected by the Abderhalden reaction.

Proceeding from this theory, the blood of patients suffering from exophthalmic goiter was examined for protective ferments. The serum of the patients was brought into contact with thyroid gland, thymus, ovary, testicle, kidney, adrenals, and liver.

By the use of the ninhydrin test it was determined which of these organs were split. The thyroid gland was split in all, and the ovaries and thymus in most, of the twenty-five cases of genuine exophthalmic goiter so far examined. The tests with the other organs were always negative. The results of these tests are to be explained as follows: (1) The first abnormal step in exophthalmic goiter is a dysfunction of the thyroid gland. (2) Also in most cases the functioning of the thymus gland and the ovaries is abnormal. In most cases of Basedow's disease it is possible not only to demonstrate the functional changes, but also to determine the nature of the abnormal function. The question now arises as to whether the dysfunction of the ovaries in exophthalmic goiter is primary or secondary. It seems evident that it is a secondary disturbance. The product of a dysfunctionating thyroid gland has ovariotrophic significance, which means that it invades the ovaries and influences the activity so that a dysfunction results. Finally we must refer to the fact that a disturbance of the ovary, is indicated by one of the symptoms of exophthalmic goiter. This is the exaggerated growth in stature of patients suffering from exophthalmia which was first mentioned and studied by Holmgren, and which depends on an abnormally long persistence of the epiphyses. The well-known investigations of Sellheim concerning the influences of castration on the growth of the bones permit us to regard the disturbances of the germinal glands as the cause of the delayed ossification of the epiphyses in the long bones of patients suffering from exophthalmic goiter.

Gengenbach: Precocious Menstruation. *J. Am. M. Ass.*, 1913, lxi, 563. By Surg., Gynec. & Obst.

The report of a case of precocious menstruation is given with a discussion of its probable cause. The patient, a child two years of age, bottle fed, had the first menstrual flow, lasting three days, when 10 months old. Menstruation recurred at intervals of one to three months, most frequently at intervals of six weeks. For a few days before the periods a slight leucorrhœa was noticed. The child was cross and acted as if in pain. The peculiar menstrual odor was very marked. It was necessary for the child to wear napkins during a period of about a week. Its weight was 41.5 lbs. and its height, 39 inches. It had 18 teeth. The circumference of the head was 19 inches. The measurement of the chest below the breasts was 21.25 inches and across the breast, 23 inches. The abdomen at the naval was 22 inches and the pelvis 23 inches. The breasts were noticeably prominent, and there was a growth of hair under the arms and about the external genitalia.

HENRY SCHMITZ.

OBSTETRICS

PREGNANCY AND ITS COMPLICATIONS

Ladinski, L. J.: *The Elastic Area in the Isthmus of the Uterus, a Positive and Early Sign of Uterine Pregnancy.* *Am. J. Obst., N. Y.*, 1913, lxviii, 210. By Surg., Gynec. & Obst.

The author says that by bimanual examination he has invariably found "a change in early uterine pregnancy which consists of a circular area situated in the median line of the anterior surface of the body of the uterus, just above the junction of body and cervix; that is to say, at the isthmus of the uterus, which varies in size according to the duration of pregnancy, and offers to the palpating finger the distinct sensation of elastic fluctuation. It can frequently be made out as early as the fifth week, when the area is only the size of the finger tip, but it can always be felt in the sixth week when it is somewhat larger."

N. SPROAT HEANEY.

Schottlænder, J.: *The Determination of the Duration of Pregnancy on the Basis of Histological Placental Findings, and the Possible Practical Utility of these Findings. A Reply to Peters' Article with the Same Title.* (Über die Bestimmung der Schwangerschaftsdauer auf Grund histologischer Placentarbefunde und über etwaige praktische Verwertbarkeit dieser Befunde. Eine Antwort auf den gleichnamigen Artikel von Peters. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 806. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author calls attention to the fact that no previous description of the exact histology of the placenta in its various stages is found in the literature, and adds that his assertions merely pointed out the possibility of determining the age of the foetus by this means. Peters does not take up the differences in the staining qualities of the blood cells, and the author feels confident that the age of the foetus can be estimated in this way. The first to the second month and the third, fourth, fifth, and sixth months can be determined, while probably between the sixth and tenth months differentiation may be fixed by the blood cells. He cites two instances that go to prove that this method may be of aid in forensic medicine.

JONAS.

Gammeltoft, S. A.: *Nitrogen Metabolism During Pregnancy* (Untersuchungen über den Stickstoffwechsel während der Gravidität). *Skandinav. Arch. f. Physiol.*, 1913, xxviii, 325. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author's investigations made upon pregnant rats, rabbits, dogs, and goats show that pregnancy causes a storage of nitrogen which, on a constant and medium diet, is less than the amount of nitrogen

lost by the maternal organism as the result of the formation of the foetus. Accordingly, at the end of the gestation there is a nitrogen deficit. By over-feeding it was possible to reverse this to a certain degree. Diuresis is increased during pregnancy and the relation of the urea excreted to the total nitrogen is within physiological limits. The output of ammonia, amino acids, polypeptids, and creatin is increased. In the uric acid excretion the variations lie within physiological limits. The hippuric acid excretion is decreased. The cause for the changes in the amounts of nitrogen-containing decomposition products excreted is to be sought in the liver, but in normal pregnancy these changes are so slight that they do not warrant our suspecting pathological changes in the liver.

NOVAK.

McNee, J. W.: *The Cholesterin Content of the Bile During Pregnancy* (Zur Frage des Cholesteringehalts der Galle während der Schwangerschaft). *Deutsche med. Wchnschr.*, 1913, xxxix, 994. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author had occasion to examine the cholesterol content of the bile obtained in three autopsies made on patients who had died during the fourth, fifth, and sixth months of pregnancy. He employed the method of Windaus modified according to Weston and Kent. He found an average quantity of 0.621 per cent, which is about four times the quantity in the bile of the non-pregnant. This result was due to the fact that the percentage was calculated only on the basis of the liquid of the bile and not the solids. However, as this was the case in all experiments previously conducted, the figures are relatively accurate. In these three cases Laudau was able to demonstrate an increased cholesterol content also in the suprarenals which probably accounts for the hypertrophy of these organs during pregnancy.

HOLSTE.

Kingman, R. A.: *The Pernicious Vomiting of Pregnancy.* *Am. Med.*, 1913, viii, 519. By Surg., Gynec. & Obst.

The author believes that in the vast majority of cases of "pernicious vomiting" there is ante-flexion of the cervix uteri with varying degrees of descent of the uterus upon the pelvic floor, and more or less fixity of the uterus. The latter is due to thickening and contraction of the periuterine cellular tissue especially in the utero-sacral ligaments. The main points of the author's conclusions are as follows:

1. Pregnancy is a physiological process in which nausea and vomiting have no useful, necessary, or normal part. They are, therefore, never physio-

logical, but always pathological and should be prevented or stopped in every case, and at once.

2. Toxæmia plays no important part as a cause of the vomiting of pregnancy, though it is doubtless often present as a result of a common cause, and may be a factor in advanced cases.

3. Neurotic influences greatly increase susceptibility to reflex stimuli.

4. The essential, exciting, and determining cause in all serious cases is a reflex disturbance proceeding from the uterus, usually from the cervix and especially from the region of the internal os.

5. Intelligent treatment based upon this conception of the trouble has resulted in a quick, uniform, and permanent cure in every case during a period of twenty years, regardless of the stage or severity of the case, and provided that the patient was not moribund when first seen.

6. Such results can be obtained by anyone who will fit himself to make an accurate diagnosis of the pelvic condition and to properly carry out the indicated treatment.

The author's treatment follows the general principles advocated by Hewitt. With the waist and lower ribs free, the patient is placed in the knee-chest position and the vagina is distended with air. In very obstinate cases, the finger may be used to supplement the pull of gravity while the patient is in the knee-chest position. The vagina is then packed reasonably full with tampons made of lightly-felted curly wool, and tied at six-inch intervals with a soft twine or linen thread. The first tampon is dipped in a solution of ichthyol or white petrolatum. The vagina is distended uniformly by the air pressure. The wool simply supports the pelvic organs, thus improving their blood supply. The tampon should be removed at the first symptom of discomfort and in any case after twenty-four to thirty-six hours. Hewitt's air ball pessary may be useful in cases which cannot be treated regularly. A small, gentle, cleansing douche may be given safely.

C. H. DAVIS.

Rosenthal, L. B.: Patent Ductus Arteriosus, Report of a Case Complicated by Pregnancy.
Am. J. Obst., N. Y., 1913, lxviii, 252.

By Surg., Gynec. & Obst.

The author reviews the subject of patent ductus arteriosus and reports a case diagnosed as such which successfully withstood pregnancy and Cæsarian section. The clinical report is complete including the fluoroscopic picture, an orthodiagram and electrocardiographic curves, and several pulse tracings.

N. SPROAT HEANEY.

Pankow: The Frequency and Significance of Cardiac Disease During Pregnancy (Häufigkeit und Bewertung der Herzfehler in graviditate).
Deutsche Gesellsch. f. Gynäk., Halle, 1913, May.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The frequency of cardiac disease during pregnancy can be determined only by systematic ex-

amination of all of the pregnant women of a lying-in hospital and dispensary. Such examinations have been carried out at the Freiburg Women's Clinic and also at the Düsseldorf Women's Clinic in over 5,000 women. The examinations were all made by an internist. Kùpferle in Freiburg investigated especially the question of accidental heart murmurs. He made these examinations before labor and during the puerperium and found that 49.2 per cent of the women had accidental murmurs and 2.8 per cent actual organic disease. Accidental murmurs are not always easy to diagnose. Kùpferle refers to two points in the diagnosis: (1) An increase in the relative cardiac dullness to the left is found in all pregnant women, even in women without murmurs; but an increase towards the right is demonstrated only in organic disease. (2) In organic disease the murmur is different from that of accidental murmurs. In accidental murmurs the first sound is clear, and followed first by a very short intermission and then by the murmur. In organic disease the first sound is partially covered by the murmur, and the latter continues over the greater part of the systole. The accidental murmurs are mostly soft, blowing sounds. There may be also, however, pronounced loud murmurs and not rarely also an accentuation of the second pulmonic sound. The murmurs probably originate in the pulmonary vessels and can be heard most distinctly in the third left intercostal space or over the third rib close to the sternum.

In the significance of cardiac disease, the condition of the myocardium undoubtedly plays an important rôle. However, endocardial disease can not be considered of equal importance, unless it is complicated by myocardial disease. Mitral stenoses are the most unfavorable from a prognostic standpoint because they add a large amount of work to the small blood circulation and therefore more easily bring about a decompensation. In addition, a mitral stenosis labors from its beginning with the small reserve force of the right ventricle. On the other hand, a mitral insufficiency has the large reserve force of the left ventricle behind it. Therefore, aortic valvular diseases, which in the beginning do not impede the small blood circulation, must be generally considered as the more favorable from a prognostic standpoint.

The author gives the following general indications for the artificial interruption of pregnancy, which must of course be applied to each case individually: (1) If a woman suffering from organic heart disease becomes pregnant and if signs of insufficiency of the heart do not appear in the course of pregnancy, then pregnancy should not be interrupted, as in all probability complications are not to be expected intrapartum. (2) If signs of insufficiency of the heart appear even during the first half of pregnancy, showing that the slight increase in the work of the heart already exhausts the reserve force, then pregnancy should be interrupted in all kinds of heart disease, as the increased work

placed on the heart towards the end of pregnancy and during labor may lead to a sudden failure of the heart. This applies especially to those cases in which the signs of decompensation existed before the occurrence of pregnancy. (3) If signs of decompensation appear towards the end of pregnancy, then the latter must be interrupted in mitral stenosis, especially if marked signs of a severe myocardial disease are present. The treatment is expectant in mitral insufficiency if signs of decompensation permanently disappear after a corresponding treatment. If the signs of decompensation continue to exist, or if they immediately recur after interruption of the treatment, then it is preferable to interrupt the pregnancy through vaginal section considering the increase in the amount of work put on the heart by labor. The frequent complication of mitral stenosis and insufficiency may render the procedure considerably difficult. (4) If signs of decompensation appear during labor then treatment should be expectant if labor is apparently almost terminating, otherwise labor should be cut short by extraction of the child.

Davis, E. P.: The Surgical Treatment of Bacillus Coli Communis Infection Complicating Pregnancy; with Report of Cases. *Tr. Internat. Cong. Med., Lond., 1913, Aug.*

By Surg., Gynec. & Obst.

The writer draws attention to the fact that infection by the bacillus coli communis during pregnancy may cause appendicitis, infection of the pelvis of the kidney usually upon the right side, and, less frequently, cholecystitis.

The diagnosis of infection is made on the basis of the usual signs of resistance in the organism, fever, increased pulse, and leucocytosis.

When infection of the kidney develops, its most significant symptom is a strongly acid urine and the presence of large numbers of the bacillus coli communis in pure culture.

Experience shows that many of these cases recover without operative interference, if rest in bed and liquid food are given and free use is made of water, the milder alkalies, and antiseptic substances. Some cases do not yield to this treatment. Chills and high fever develop and there is soreness or tumor over one or both kidneys. In such cases, surgical interference is necessary.

Davis reports four cases of the latter type that were operated upon during pregnancy. First, the appendix was removed and the wound closed. Next, the right kidney was exposed by the usual loin incision. The kidney was then stitched to the wound by catgut sutures passed through the capsule, the cortex incised, and the gloved finger passed into the pelvis. Dark blood without visible pus exuded, but on examination this blood was found to be swarming with the bacillus coli communis. The kidney was drained by a strip of gauze passed to the pelvis. This drain was gradually removed later.

The four cases reported recovered without the

interruption of pregnancy. The kidney wound gradually closed and the patients went on to spontaneous labor.

While it is obvious that surgical interference is not demanded in all cases, it should be carried out promptly in many.

Engelking, E.: Ectopic Pregnancy in the Ovarian Ligament; a Contribution to the Anatomical Diagnosis of Advanced Cases (Intraligamentär entwickelte Eierstocksschwangerchaft; ein Beitrag zur anatomischen Diagnose vorgeschrittener Fälle). *Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 740.*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author gives a detailed description of an ectopic pregnancy in the ovarian ligament. He found that the tube was obstructed and the foetus was dead. He substantiated his diagnosis by microscopical and macroscopical examinations. He concludes that the ectopic lodgment of the ovum was due to a pelvic peritonitis caused possibly by appendicitis.

JAEGER.

Baldwin, J. F.: Cæsarean Section with Hysterectomy in Cases of Positive Infection. *N. Y. M. J., 1913, xcvi, 372.* By Surg., Gynec. & Obst.

Baldwin cites a case of a primipara, 29 years of age, at full term. She had had pains for two days when the bag of waters ruptured. The pains had entirely ceased and forceps delivery was impossible because the blades would not lock. The patient was exhausted, pulse 130, temperature 104.6° F. The child was large, presented at the brow, and was alive. A Cæsarean section was advised in the interest of the child and a hysterectomy in the interest of the mother. By proper procedure it was hoped to prevent infection of the peritoneal cavity. A low incision was made and the uterus brought entirely out of the abdomen. The abdominal cavity was protected by towels all around. The child was delivered rapidly. In the interior of the uterus a large necrotic patch was found. The uterine cavity was flushed with tincture of iodine which ran down through the cervix into the vagina. A supravaginal panhysterectomy was then completed, except that one ovary was saved. The appendix was removed. The incision was closed without drainage. The temperature fell immediately and the patient made an uneventful recovery.

HENRY SCHMITZ.

Peterson, R.: The Indications for Abdominal Cæsarean Section. *Surg., Gynec. & Obst., 1913, xvii, 198.* By Surg., Gynec. & Obst.

The author discusses some of the more important and common indications for abdominal Cæsarean section. He advocates conservatism in obstetrics and denounces the practice of solving all obstetrical problems by abdominal Cæsarean section. He is of the opinion that with the modern aseptic technique Cæsarean section should, in a measure, take the place of the high-forceps operation.

First, under the heading, "obstructions to labor" the author considers contracted pelvis. He calls

attention to the uncertainty of pelvic measurements and advocates, in moderate contractions of the pelvis, that the patient be given a test of labor. Patients who are undoubtedly infected, due to repeated vaginal examinations and unsuccessful vaginal manipulation, should not have the abdominal Cæsarean section performed. In such cases, craniotomy is preferable. Labor is sometimes obstructed by uterine fibromyomata which may be cervical or intraligamentous in location. The majority of women having fibromyomata do not carry the child to full term because changes occur in the decidua. The Porro Cæsarean section is indicated where fibroids obstruct the canal. Ovarian cysts so located that reduction of the size of the uterus prior to their removal is necessary, form an indication for Cæsarean section.

Stenosis of the cervix and vagina due to scar tissue originating at previous confinements is also discussed. This condition makes spontaneous delivery impossible and artificial dilatation of the scar tissue is dangerous compared to Cæsarean section. Previous ventro- and vagino-fixations of the uterus sometimes give rise to distention and thinning out of the posterior uterine wall during pregnancy. In this case, Cæsarean section is preferable to attempts at delivery from below. At times in a normal uterus the large size of the child offers an indication.

Where a severe concealed accidental hæmorrhage is taking place, the mother's condition alarming and growing worse, and the cervix so rigid as to require considerable time to secure dilatation enough to empty the uterus, better results will be obtained by a laparotomy.

In discussing eclampsia, the author states that when the pelvis is contracted and there is little or no chance of sepsis, abdominal Cæsarean section has given good results. In 245 cases of eclampsia treated by this method, the maternal mortality was 24 per cent. In 317 cases the foetal mortality was only 5.5 per cent.

Baldwin, J. F.: Two Unusual Cases of Ectopic Pregnancy; One a Triplet. *J. Am. M. Ass.*, 1913, lxi, 392. By Surg., Gynec. & Obst.

The first case was that of a patient thirty-seven years of age who had been married nineteen and a half years. She had two children; the youngest was sixteen years old. Her labors, except for one miscarriage thirteen years before at the sixth week, for which there was no assignable cause, were normal. Menstruation was normal and regular. The last period occurred two weeks before. An operation was performed for a proclivita which had been very annoying for the last two years. During the laparotomy a bilateral tubal pregnancy was discovered. On closer examination two fetuses were found in the left tube and one in the right. The embryos were of the same size and about as large as peas. The pathologist reported that all three were embryos of the same age. The second case was an ordinary tubal pregnancy. HENRY SCHMITZ.

LABOR AND ITS COMPLICATIONS

Gallant, A. E.: Prolonged Precipitate Parturition Due to Disengagement of the Disproportionate Head. *Med. Rec.*, 1913, lxxxiv, 337.

By Surg., Gynec. & Obst.

The author reports five cases of normal-sized pelvis in which there was dystocia due to a slight malposition of the child's head. With these, corrected labor ended rapidly. In two cases forceps were applied and, as the result of a too-heavy pull, the birth was precipitated and caused a severe tear of the perineum. It is possible by simple maneuvers to shorten the labor with less danger to both the mother and the child.

The manœuvres recommended are as follows: (1) External pressure on the buttocks at the fundus, which exaggerates the flexion of the trunk upon itself and of the chin upon the sternum; (2) external pressure on the occiput just above the symphysis, with the palm of the hand pressing the occiput down into the brim; (3) internal pressure on the forehead, with the fingers in the cervix, tilting the forehead upward during each pain; (4) the introduction of a single blade of the forceps to the occiput and gentle traction during a pain to facilitate flexion and engagement. This is best accomplished by a solid blade forceps, as the head will move more readily and the bulk of the forceps will help to fill up the roomy inlet and aid the head to engage more firmly and advance more surely; (5) guidance traction: high forceps — with loosely fitting blades, chiefly as guides and to prevent recession, care being taken not to drag too vigorously or suddenly or pay the penalty of a too-precipitate delivery and a tearing of the perineum of the mother which could have been avoided; (6) the judicious combination of two or more of these manipulations as the case may demand.

EDWARD L. CORNELL.

Bogdanowitsch, M.: Delivery in Total Paralysis of the Body (Entbindung bei vollständiger Lähmung des Rumpfes). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 809.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A xiii-para, thirty-seven years of age, had been suffering since the third month of pregnancy with a rapidly developing myelitis that began in the arms and spread to the trunk and legs. During the last weeks she suffered from urinary incontinence. On account of her hopeless condition Cæsarian section was contemplated, when labor contractions suddenly began. They were noticed by the attendant, but the patient experienced no pain. Within three hours the child was expelled by the breech, living but immature (44 cm., 2450 gm.). The placenta followed in fifteen minutes. There were no abdominal contractions as the abdominal muscles were paralyzed. The patient died three days later. Autopsy revealed a fibro-endothelioma of the spinal dura mater in the region of the atlas, with compression and softening of the spinal medulla.

This case is an excellent proof of the fact that the

motor functions of the uterus are independent of the spinal cord and are stimulated from peripheral nerve centers located in the uterus. TORGGLER.

PUERPERIUM AND ITS COMPLICATIONS

Werner: A Case of Puerperal Tetanus with Recovery (Über einen geheilten Fall von Tetanus puerperalis). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 671.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

On November 25, 1913, the patient was delivered with forceps. A perineal tear was not sutured. Ten days after delivery she complained of difficulty in swallowing and slight trismus. The next day decided trismus set in, followed by rigidity of the neck and severe difficulty in swallowing. 100 units tetanus antitoxin (Höchst) were administered. On the following day the muscles of the face, arm, and lower limb were affected. Repeated convulsions occurred. The temperature rose to 40.6° C. Four more injections of 100 antitoxin units were given subcutaneously within the next few days. In addition, vaginal douches of a solution of powdered dried senna were employed. At the end of four weeks the patient was discharged cured.

ZINSSER.

Peterson, R.: Emptying the Uterus as a Method of Treatment of Puerperal Eclampsia. *Am. J. Obst.*, N. Y., 1913, lxviii, 201.

By Surg., Gynec. & Obst.

In this article Peterson has made a statistical study of the results obtained in a large number of cases of eclampsia collected from the literature, and draws the following conclusions:

1. Since the cause of eclampsia is still unknown, its treatment of necessity must be empirical.

2. Only through the analysis of large numbers of cases can the value of any particular treatment be correctly estimated.

3. In a large series of cases of eclampsia prompt delivery gave a maternal mortality of 15.9 per cent as compared with a maternal mortality of 28.9 per cent where the delivery was long delayed.

4. When the uterus is emptied immediately or very soon after the first convulsion the maternal mortality is still lower.

5. While before 1900 in a large group of cases the maternal mortality was 5 per cent in favor of conservative treatment and spontaneous labor, between 1900 and 1912, on account of better and more prompt obstetrical surgery, the figures were reversed and showed that the maternal mortality was 4 per cent lower after the radical treatment than after the conservative treatment of the complication.

6. Therefore, the treatment of antepartum eclampsia should consist of emptying the uterus as quickly as possible after the first convulsion.

7. The operative procedure that will empty the uterus most quickly and with minimum trauma and shock to the eclamptic mother and child is the one to be selected.

N. SPROAT HEANEY.

Zincke, E. G.: The Medical Versus the Surgical Treatment of Puerperal Eclampsia. *N. Y. St. J. Med.*, 1913, xiii, 422.

By Surg., Gynec. & Obst.

The author gives a very interesting review of the statistics of the medical and the surgical treatment of eclampsia. He claims that the maternal mortality from the surgical treatment is higher than that following the medical treatment. During the past ten years he has treated thirty cases of eclampsia, with a maternal mortality of 13.3 per cent, and a foetal mortality of 50 per cent. Two of the mothers were moribund when seen by him and a third died of shock and hæmorrhage following an *accouchement forcé* performed by the doctor in charge of the case. The fourth died soon after the eleventh convulsion and a comparatively easy vaginal hysterotomy performed without an anæsthetic.

Zincke advocates the following treatment: If the patient has, or has had, convulsive seizures, 25 drops (15 m. or 1 ccm.) of Norwood's tincture of veratrum viride should be given hypodermatically, and repeated every hour until the pulse is reduced to 60 per minute or less. If within an hour the pulse falls from 150 to 100 per minute, only from 10 to 15 drops should be injected in the succeeding dose. More than two or three injections are rarely necessary to bring the pulse down to 60. A copious enema of soap water serves to wash out the large intestine. The bladder should be emptied with a catheter, and the urine measured and examined. As soon as the patient is able to swallow, a saline cathartic should be administered. If this is ineffective, stronger cathartics may be given. Immediately afterward, the patient should be given a hot bath or hot pack, rubbed dry, and placed in a warm bed. The bath or pack should not be given oftener than twice in one day.

The only food should be milk or broth or both. Water or Fischer's solution may be freely administered. The latter may be given per rectum or, in urgent cases, intravenously. Chloral, per os or rectum, should be given if the patient is very restless. The author has discarded chloroform and morphia. Ether or gas-ether is the anæsthetic of choice.

C. H. DAVIS.

Polak, J.: On the Management of the Interior of the Uterus in Post-Abortal and Post-Partial Infection. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

From a study of nearly 2000 cases the author draws the following conclusions: (1) The high morbidity in puerperal infection is due to meddlesome interference with the endometrium by surgical methods; (2) curettement of the placental site is a potent cause of thrombophlebitis of the pelvic veins; (3) the endometrium should never be curetted in streptococcal infection, whatever the stage of the pregnancy; (4) when the inside of the uterus is not disturbed by exploration, the infection is generally confined within the uterus and peritonitic and parametric complications are seldom noted.

The author analyzes one hundred and four cases treated in his wards by "conservative neglect" of the interior of the uterus. In no instance was the intra-uterine content disturbed. Only three deaths occurred, a mortality of less than three per cent.

Eight-four cases followed full-term delivery. Twenty were of the post-abortion type.

These women were placed in the Fowler position for postural drainage. Ergot and pituitrin were administered freely to secure uterine contraction and retraction. An ice bag was placed over the uterus and the physical resistance was sustained by forced feeding, strychnine, vaccines, and open-air treatment. Retained material was not removed.

Intra-uterine cultures were taken from eighty-nine patients. Fifteen had a closed cervix and in these no cultures were obtained. A hæmolytic streptococcus was recovered from the uterus thirty-four times; a non-hæmolytic, fifteen times; combined growths, fifteen times; staphylococci alone and in combination, fifteen times. Ten cultures were sterile.

Blood cultures were made in ninety-eight cases. In forty-six, streptococci of the longus or brevis types were recovered. Only two were hæmolytic.

In one of the three fatal cases no organism was developed from the blood; in another the streptococcus brevis was recovered; and in the third the bacteræmia was due to the staphylococcus aureus.

These facts are particularly impressive when it is remembered that a hæmolytic streptococcus was recovered in thirty-four uterine cultures and it would seem to confirm the author's conclusions regarding non-interference in puerperal infections.

Staude, C.: Peroneus Paresis Post-Partum (Über Peroneuslähmung postpartum). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 611.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

CASE 1. The patient was a primipara, twenty-two years old, with a cephalic presentation. After a prolonged labor, she was delivered by forceps on account of an increase in her temperature and an acceleration in the sounds of the foetal heart-beat. The child weighed 4560 gms. A few hours after delivery cramp-like pains in the right leg set in, and the following day similar pains occurred in the left leg. There were noted also points that were painful to pressure. On the third day there was urinary incontinence and a diphtheretic membrane appeared in the vagina and vulva accompanied by fever. Next, a vesico-vaginal fistula developed to the size of a dollar. Six weeks after delivery the patient was allowed to get up. A weakness of the right leg was observed, due to peroneal paresis. An operation for the repair of the vesico-vaginal fistula was performed later and was complicated by the close proximity of the ureteral openings to the edges of the fistula. An improvement in the paresis was obtained after one year's treatment. The patient was able to walk fairly well with crutches and later

without them after the application of an elastic support for the foot. This paresis is explained by the prolonged pressure of the head in its slow passage through the pelvis. The fistula also was due to the same cause. In the literature four other cases of vesico-vaginal fistula complicated by peroneal paresis are recorded.

CASE 2. The patient was forty-two years old, a viii-para, with cephalic presentation and normal pelvis. During the second stage of labor she complained of pain on the outer side of the legs and feet. After cessation of the foetal heart tones, the anterior leg was brought down and extraction was rendered by delivery of the arms. Soon after delivery painful parasthæsiæ set in on the outer side of the legs and feet. Paresis gradually increased until the motor and sensory disturbance was complete in the peroneal region of the left leg and partial in the right. After a year, complete recovery had taken place.

The author gives a detailed account of the anatomical relations and the mechanism of nerve injury. An isolated peroneal paresis is rare, the lesions usually occurring in the ischial plexus, and the tibial as well as the obturator are involved. Paralysis of the glutei has rarely been observed, but is probably often overlooked. The latter produces a waddling gait and makes stair-climbing more difficult. The pains on the posterior surface of the thigh and outer surface of the leg are pathognomonic of the traumatic origin of the paresis, coming on during labor and usually preceding the paresis. Occasionally cramp-like contractions are observed in the limb during labor. Most of the labors require forceps delivery. Paresis is recognized only after a time, usually when the patient rises on the tenth day. It is frequently bilateral, but not equal in both sides. In the crural region, neuralgias and disturbances of sensation occur; never any paresis. The contracted pelvis plays an important rôle, the generally contracted type being more unfavorable than the flat rachitic. Injury to the nerves occurs much more often in cephalic presentations than in breech.

Staude lays considerable stress on the possibility of causing injury while forcibly hinging down a foot with the breech in the pelvis. Particular care is necessary in this manœuvre. The prognosis of puerperal peroneal paresis is not always favorable, dependent as it is upon the duration and force of the pressure exerted upon the nerve and upon the extent of the paresis. Duration is usually prolonged. Any pains or parasthæsiæ occurring in the peroneal region during labor must be considered danger signals.

EISENBACH.

MISCELLANEOUS

Wolff, B.: Foetal Hormones (Über fötale Hormone). Habilitationsschrift, Rostock, 1913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The chemical influence of the germinal cells during conception, the developmental importance of

the internal secretion of the foetus, the influence of the mother upon the child and of the child upon the mother during pregnancy, and the relation of the foetal hormones to tumor pathology are discussed in detail. Chemotropism of the germinal cells and chemical stimulation in their development is probably an hormone function. Just as a pregnancy reaction of the maternal organism is caused by the foetal structure, so a pregnancy reaction of the foetal organs occurs through the maternal structures.

It is not certain whether or not the germinal glands and the adrenals functionate during intra-uterine life. The thyroid gland and the hypophysis are active only under certain abnormal conditions. We have only a few positive proofs that the development of the foetus is influenced by its endocranial glands, but it may be dependant upon the hormones of the maternal organism, the uterus, ovaries, thyroid gland, etc. A number of the pregnancy changes in the mother, such as the changes in the mammary glands, the commencement of labor, the formation of protective ferments, the increase in the amount of antitrypsin in the blood, and intoxications are the result of the action of the foetal hormones. The pre-adolescence of women with tumors is due probably to the action of the hormones of blastomes with embryonal tissue upon the genital organs. It is known that pregnancy influences the growth of blastomes.

GRÄFENBERG.

Rougy, A. F.: The Use of Foetal Serum to Cause the Onset of Labor. *M. S. J.*, Calcutta, 1913, x, 109.
By Surg., Gynec. & Obst.

After discussing the work of Heide, the author takes up his own. Rougy followed the technique suggested by Heide in making the foetal serum. He used also practically the same general plan for his experiments. The foetal serum was tried on nineteen patients. In six cases, one or more injections produced labor pains which led to the expulsion of the child. All of these patients were at least ten to eighteen days before term. Two cases of inertia responded well to the serum shortly after the injection. The urine of one patient for whom the serum was used to bring on labor because of threatened eclampsia showed albumin and casts and was scant in amount for the twenty-four hours previous. In this case 55 ccm. of the serum was given in three days. The urine cleared after the first injection of 11 ccm. and the patient passed 80 ounces in the following 24 hours. Her general condition also improved. In seven cases the results were negative.

During the course of their investigations, Heide and Rougy found that severe contractions of the uterus did not cause pain unless the presenting part or the bag of waters compressed the cervix or other pelvic organs. Small doses of the serum seem to cause more of a reaction than larger doses. The most frequent symptoms noted by the author were chill, which lasted from two to thirty minutes, nausea, and vomiting.

EDWARD L. CORNELL.

Dietrich: Intrauterine Rupture of the Foetal Liver (Intrauterin entstandene Ruptur der kindlichen Leber). *Monatschr. f. Geburts. u. Gynäk.*, 1913, xxxvii, 868.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The rupture occurred in the right lobe of the liver, near the lower margin, and consisted of deep stellate tears through the parenchyma. The child was delivered with forceps on account of the prolonged labor. The heart tones were normal before the extraction was begun, but were absent at birth. Autopsy showed that the child died of internal hæmorrhage into the peritoneal cavity through the hepatic rupture.

ZINSSER.

Adair, F. L.: Care of the Umbilical Stump. *J. Am. M. Ass.*, 1913, lxi, 537.

By Surg., Gynec. & Obst.

Adair discusses the etiology, pathology and clinical signs of omphalitis. He reports the bacteriological investigations carried on in sixty-five cases of new-born babies. In seventeen cases there was no bacterial growth. Non-pathogenic bacteria were found in thirty-three cases and pathogenic organisms in twelve cases. The staphylococcus was found in eight cases and the bacillus coli in four. In other words, pathogenic organisms were present on the cord and in its surroundings in nearly one fifth of the cases immediately after birth, although rigorous measures were taken to obtain aseptic conditions.

Essentials for the growth of organisms are: first, the presence of germs; second, the proper degree of temperature; third, suitable culture media and environs; and fourth, the presence of moisture. We can prevent the contamination of the parts and assist in the removal of the organisms by aseptic and antiseptic measures. The body-heat furnishes the proper temperature for bacterial growth but cannot be interfered with. The devitalized tissue of the cord forms an excellent medium. This we may remove by ligating or clamping the cord close to the skin margin. The presence of moisture may be controlled by keeping the small stump of cord under conditions which favor rapid drying.

These four conditions were fulfilled as follows: After the cessation of pulsation the cords were clamped near the skin margin and the surrounding skin and cord were cleansed with alcohol. The clamp was removed and in the groove that it had made a ligature was placed. In some cases the end of the cord and the surrounding skin were painted with 50 per cent tincture of iodine and in others they were left untreated. A sterile gauze dressing was then tied over the end of the cord. The babies were oiled for three days and then washed until the navel was healed. After this, tub baths were given. Each day the surrounding skin was washed with alcohol, and the dressing changed when necessary. By this comparatively simple method even serious umbilical infections were quite effectively combated.

HENRY SCHMITZ.

Krüger: The Care of the Nipple During Pregnancy (Warzenpflege in der Schwangerschaft). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 867.
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Sixty per cent of the nipples that received no preliminary prophylaxis during pregnancy remained intact during the nursing period, whereas only fifty-four per cent of those that received attention did not become excoriated or fissured. Those cases that received preliminary prophylactic attention not infrequently developed a mastitis. Krüger considers manipulation about the mammaræ dangerous, for he has found it to be sufficient to bring on premature delivery.

ZINSSER.

Bailey, H. C.: The Clinical Significance of the Urine in Pregnancy. *Am. J. Obst.*, N. Y., lxviii, 263.
By Surg., Gynec. & Obst.

The author ends his exhaustive article with the following conclusions:

1. Liver degeneration in the toxæmias of pregnancy is accompanied by low nitrogen excretion. Changes have been reported also in the ratios of the nitrogen fractions.

2. Liver degeneration produced by a number of toxic substances is accompanied invariably by an increase in the total nitrogen excreted, but without important changes in the relationship of the various fractions to the total nitrogen.

3. Folin's work would attribute the amino-acid deamination chiefly to the tissues.

4. Pre-eclampsia and eclampsia may show no marked changes in the nitrogen partition.

5. It is probable that except for a lowering of the total nitrogen and changes in the various fractions due to the diet and the amount of absorption, the nitrogen partition in eclampsia will show no great differences in relationship.

N. SPROAT HEANEY.

Thompson, W. M.: The Influence of the Thyroid Glands on Pregnancy and Lactation. *Surg., Gynec. & Obst.*, 1913, xvii, 226.

By Surg., Gynec. & Obst.

In this paper are presented the reports of various laboratory workers together with a description of some experiments made by the author. It is shown that the sexual organs cause changes in the thyroid gland and the latter also influences the former. Thus in pregnancy there is a well-recognized hypertrophy of the thyroid that is normal. Goiter is discussed (1) as to the influence of childbearing on Graves' disease, (2) as to the influence of goiter on childbearing, and (3) as to the condition of the children of exophthalmic mothers. Clinical reports on the influence exerted by the thyroid upon lactation were cited. After reviewing the experiments of Marne and Lenhart, of Halsted of Johns Hopkins, and of Alguier and Thienveny, the writer closes with a description of experiments made on nine pregnant dogs. These experiments showed that the removal of one lobe of the thyroid had little or no influence on pregnant dogs or on their pups after birth. The

removal of one half, on the other hand, with the ligation and destruction of the remaining portion and of the parathyroids, was followed by tetanic seizures and death of the mother and pups. Further, it was shown that the total removal of the thyroid and parathyroids was followed by trembling and rigidity and that after birth of the puppies the milk was scanty and later both mother and progeny died.

Thompson's conclusions in brief are that the thyroid is a sexual gland if it originated from a glandular organ in connection with the sexual structures of the Palæostracean ancestors.

A lack of thyroid secretion influences sexual activity adversely. Sexual activity, whether it be physiological or pathological, causes a hyperactivity of the thyroids. Hyperthyroidism constitutes an index to the toxæmia of pregnancy, to counteract which the thyroids raise their antitoxic protective power. Clinical evidence supports the theory that the physiological hyperactivity of the thyroids is a valuable safeguard against the toxæmias of pregnancy.

CAREY CULBERTSON.

Polano: The Biological Diagnosis of Pregnancy (Zur biologischen Schwangerschaftsdiagnose). *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 857.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Although Polano's results were correct as a rule, he occasionally obtained a positive reaction in non-pregnancy and a negative reaction in pregnancy. He fails to explain the cause of the error. Since all foetal organs as well as the serum and amniotic fluid come into communication with the maternal blood by way of dialysis, it is just as fair to assume that any or all of these may give positive reactions as well as the placental elements.

The serum of gestation contains more hæmolysins than does that of other blood. Boiled placenta and various foetal organs, especially the lung, show a greater hæmolytic activity toward the erythrocytes of pregnant than toward those of non-pregnant women.

ZINSSER.

Schwarz: The Serodiagnosis of Pregnancy.

J. Am. M. Ass., 1913, lxi, 484.

By Surg., Gynec. & Obst.

The author refers to the greater value of Abderhalden's biological test as compared with Rosenthal's test. He discusses the underlying principles, Abderhalden's work on cell metabolism, particularly as it regards protein metabolism, the mobilization of protective ferments in the blood, and the entrance of foreign material into the blood. He describes the dialyzation method for the detection of proteolytic ferments in the blood and gives his personal experience with it.

He reports the records of twenty-one pregnant and four puerperal cases in which the test invariably gave the violet-blue ninhydrin reaction, while the controls remained colorless. He investigated also eighteen non-pregnant cases, including several tubal

enlargements and four uterine fibroids. In addition, the tests were made on two males. In all of these, the dialysates of both tests and controls remained colorless.

HENRY SCHMITZ.

Maccabruni, F.: The Applicability of Abderhalden's Reaction for the Serum Diagnosis of Pregnancy (Über die Verwendbarkeit der Abderhaldensche Reaktion bei der Serumdiagnose der Schwangerschaft). *München. med. Wchnschr.*, 1913, ix, 1259.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author investigated Abderhalden's serum reaction in one hundred cases of pregnancy. He employed the polarimetric and the dialytic methods and was able to confirm Abderhalden's results. The reaction occurs early in pregnancy and persists fourteen days after labor and after abortion. Of the results obtained in eighty-five, only one was negative and only two were doubtful. Only once was a positive reaction obtained in the absence of pregnancy.

The author further investigated the dialysis method with foetal serum. Contrary to the results of Decios, he obtained a positive reaction in several cases. The examination of the urine of pregnant women did not reveal anything definite. The liquor amnii may at times give a positive reaction. The spinal fluid in two cases of eclampsia gave a negative reaction. In a few cases of albuminuria, severe vomiting, and eclampsia, the reaction was neither very weak nor very positive. The question whether the reaction involves only the placenta or also the foetus depends upon whether the foetus produces protective ferments in the mother. The investigations so far are too few to warrant conclusions.

BENTHIN.

Herz, E.: A Case of Rupture of the Uterus Following the Administration of Pituitrin (Ein Fall von Uterusruptur nach Pituitrin). *Zentralbl. f. Gynäk.*, 1913, xxxvii, 720.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Following the injection of 1 cc. of pituitrin in a case of labor with weak pains and three to four fingers cervical dilatation, powerful contractions set in which within twenty minutes assumed a tetanic character. About one hour after the injection there occurred a severe tetanic contraction with sudden collapse, and the spontaneous delivery of a deeply asphyxiated child. The expulsion of the placenta was followed by hæmorrhage due to a transverse tear of the lower uterine segment through which the child and placenta had been delivered. The tear remained subserous. The portio was entirely free in front and connected with the uterus only posteriorly. Tamponade was performed and pantopon administered. Three weeks later the patient was discharged.

Herz believes that it is a mistake to administer pituitrin in the first stage of labor. In the case reported, however, there may have been some unusual condition. In forty-seven cases pituitrin

frequently caused nausea, dizziness, vomiting and tinnitus aureum, especially in weak, anæmic women. The influence upon the child also was bad. The unfavorable results reported from other sources include uterine atony, post-partum asphyxia of the child, collapse, tinnitus aureum, nausea and dizziness, contraction of the cervix, tetanus uteri, and premature separation of the placenta. PONTICK.

Jaeger, A. S.: Gonorrhœa in Relation to Pregnancy and the Puerperal Period. *J. Indiana St. M. Ass.*, 1913, vi, 353.

By Surg., Gynec. & Obst.

The author has classified gonorrhœal infection in the pregnant woman as follows:

Acute gonorrhœa. (1) Infection present at the time of uterine implantation. (2) Infection occurring during the first four months of pregnancy. (3) Infection occurring between the fourth and the seventh months. (4) Infection occurring between the seventh month and delivery. (5) Infection occurring after delivery, during the lying-in period. This is very rare.

Chronic gonorrhœa. Active form: (1) Simple chronic gonorrhœa in which the disease runs an unchanged course during the entire pregnancy and puerperium. (2) Acute exacerbation of a chronic gonorrhœa, occurring during any period of the pregnancy or the lying-in period. Latent form: (1) Gonorrhœa demonstrable, but subjective and objective symptoms negative. (2) Gonococci undemonstrable, but previous history, and subjective and objective symptoms suggestive.

From observation the author has learned that the treatment should differ according to the period of pregnancy on account of the danger of interrupting the pregnancy. There is always a chance of abortion during the first four months and of premature birth during the last two months, in the presence of a specific acute or chronic endometritis.

Conservatism is the keynote in treatment. Heat and instrumentation is contra-indicated. If the infection is unusually severe, active treatment is best tolerated between the fourth and seventh months.

The author uses forceps in these infected cases only as a last extremity, and believes that perineal tears should as a rule be cleansed and repaired. If the vulvo-vaginal gland has formed an abscess, it is usually drained and packed before delivery.

His conclusions are as follows: (1) Chronic gonorrhœa, or an acute involvement of the endometrium that is present at the time of uterine implantation, is much more serious as regards the successful termination of pregnancy than primary acute disease that occurs after gestation. (2) Individualism and conservatism in the treatment show the smallest percentage of serious complications and the best ultimate results. (3) Post-partum infections are best treated by absolute rest and good drainage; operative procedure should be undertaken only after careful consideration of specific indications.

EUGENE CARY.

GENITO-URINARY SURGERY

KIDNEY AND URETER

Cohnheim, Otto: The Physiology of Kidney Secretion (Zur Physiologie der Nierensekretion). *Sitzungsb. d. Heidelb. Akad. d. Wissensch. Math.-naturw. Cl.*, 1913, vi, 1.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

From an examination of mammalian kidneys taken fresh from the body, freed from blood, and macerated, the author attempted to determine whether a combination takes place between sugar and salt and the solid constituents of the kidney, and whether there is a definite limit beyond which this combination does not take place, such as Magnus had already demonstrated for the secretion of sodium chloride. From numerous experiments he came to the conclusion that such a combination actually does take place and that a sharp boundary for salt can be determined at 0.6 per cent. If the kidneys are put into salt solution of a lower concentration no combination takes place. Considerable amounts are combined from solutions of higher concentration. For grape sugar the limit is 0.3 per cent. The combination was unstable and easily dissolved by heating.

These processes cannot be explained by osmosis, because then there would be no clear explanation for the sudden variation in the limits, but Cohnheim believes that the kidney fixes the material from the solution by chemical combination and absorption.

LOBENHOFFER.

Grigorjew, S. P.: The Radiographic Examination of the Kidneys (Die Röntgenuntersuchung der Nieren). *Verhandl. d. XII Kong. russ. Chir.*, 1913, xii, 173. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author considers important not only radiography of the kidneys but also the fluoroscopical examination. The absence of respiratory movement of the kidney speaks for perinephritic adhesions. The higher grades of wandering kidneys can also be demonstrated in this manner. If during repeated illumination the contour of the kidney or of the muscles is not visible, a paranephritis must be thought of. Furthermore all stones larger than a millet seed can be seen on the illumination diaphragm. If during a deep respiration the stone and the lower pole of the kidney do not change their relation to each other, the shadow is of intrarenal origin. If a change does occur in the relation, the shadow is of extrarenal origin. The ureters possess a respiratory movability of 1 to 2 cm. To obtain good results in radiography, the time of exposure must not be more than one sixth to one tenth of a second and two exposures should be taken, one during inspiration and one during expiration.

The author has collected eighty-two cases of nephrolithiasis. In eleven cases the stones were passed. In forty-four cases the stones were removed by operation. In two cases the stones were bilateral. In all instances the radiographic diagnosis was correct. Only in one case in which the stone was localized in the cervix of the uterus was it found above it in the infundibulum. In six cases the diagnosed stones were not found on operation. In three of these, however, a spontaneous expulsion of the stone was observed, and in the other three the stones remained in the kidneys and gradually increased in size. According to the author, the determination of the size of the stones by means of false projection is impossible.

HESSE.

Kawasoye, M.: Anatomical Changes in the Kidney After Ligation of the Ureter (Ein weiterer Beitrag zur anatomischen Veränderung der Nieren nach dem künstlichen Ureterverschluss). *Ztschr. f. gynäk. Urol.*, 1913, iv, 107.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports the anatomical changes in a case of hydronephrosis, in which the post-mortem examination of the animal was made 309 days after the ligation of the ureter. Corbett found changes caused by nephrotoxic processes on the non-ligated side. Kawasoye, however, did not find such changes and emphatically denies that any change is caused on the non-operated side by the ligation of the ureter. The alterations found by Corbett he believes must have been caused by septic infection resulting from the operation. On the ligated side there was a marked atrophy of the parenchyma, while the same amount of fluid was present in the pelvis of the kidney after 309 days as after 70 days. The glomeruli were the most resistant part of the kidney parenchyma.

A. HIRSCHBERG.

Hadden, D.: Bacteriology of the Urine in Relation to Movable Kidney. *Calif. St. J. Med.*, 1913, xi, 326. By Surg., Gynec. & Obst.

Hadden records eight cases to show that a displaced kidney causes stasis of the urine, and, through the alteration of the chemical contents, furnishes a medium on which certain germs, entering from the neighboring organs or from the blood stream, can grow.

He believes that left-sided ptosis is more frequent than is generally supposed, and that in many cases it is not associated with right-sided ptosis. The reason he gives for the fact that many cases of displaced kidneys are without symptoms is that the individual is in good physical condition and as long

as such is the case, the peristaltic action of the kidney, pelvis, and ureter is maintained and stasis of urine is prevented.

In the treatment, results cannot be expected from vaccines until the ptosis is corrected and drainage is effected. He claims that we have swung from kidney fixation because we have tried to cure movable kidneys, associated with enteroptosis, without supporting the other organs. He inclines to the method of Longyear with the fixation of the capsule as it corrects any colon sag that may be present.

His conclusions are as follows: (1) Normal urine is sterile; (2) the greater number of chronic infections of the urinary tract are associated with a bladder or kidney ptosis or both; (3) "unilateral nephritis" is a condition of infection having a kidney sag as its origin; (4) many movable kidneys are without pathological significance because the muscle tone is unimpaired; (5) when the muscle tone becomes impaired we have urine stasis and infection; (6) every movable kidney is a latent source of trouble; (7) in the bacteriological examination of the urine we have a means of diagnosing the pathological "floating kidney"; (7) the degree of symptomatology depends on the kind of infection and the sensibility of the patient; and (8) if we are able to diagnose positively a pathological "floating kidney," we will consider more seriously the operative treatment and the type of operation, for at best the kidney support is only temporary and it is often impossible to apply it properly. LOUIS GROSS.

Vincent, W. G.: An Unusual Case of Renal Hæmaturia; Unilateral Chronic Hæmorrhagic Nephritis; Decapsulation; Apparent Cure; Recurrence; Bilateral Involvement; Decapsulation of Both Kidneys Six Years Later. *Med. Rec.*, 1913, lxxxiv, 106. By Surg., Gynec. & Obst.

The author reports a case in which the right kidney was found to be the source of severe and long-continued hæmorrhages. Decapsulation on that side was followed by a rapid disappearance of the symptoms and an apparent cure for five years. During the sixth year, the symptoms recurred and catheterization of the ureters showed that the hæmorrhage was bilateral. Decapsulation of both sides was then performed. Patient's condition improved, but symptoms were not fully relieved.

Examination of sections from the kidneys showed chronic hæmorrhagic nephritis. The right kidney gave evidence of "replacement fibrosis" following the first decapsulation. H. L. SANFORD.

Pena, M.: On the Significance of Renal Hæmaturia Immediately Following Nephrectomy for Tuberculosis (De la valeur de l'hématurie rénale immédiatement consécutive à une néphrectomie pour tuberculose). *J. d'uro.*, 1913, iv, 43.

By Journal de Chirurgie.

Post-operative hæmaturia from the remaining kidney after nephrectomy for tuberculosis is but

little recognized, though it occurs often. It is a hæmorrhage of pure blood, and begins usually from one to five days after the operation. It may not appear until the fifteenth day. In two thirds of the cases the hæmorrhage is severe. It is intermittent and lasts usually a short time, usually for one or two days. In some cases, however, it may continue for eight, ten, or thirty days. It ceases gradually. In short, the hæmaturia following nephrectomy for tuberculosis may be characterized as an idiopathic hæmaturia, not very intense, intermittent, and of short duration.

The pathogenesis is doubtful. The hæmaturia may be due to tuberculosis of the remaining kidney, to a benign colon bacillus infection of the remaining kidney, or to the compensatory hyperæmia of the remaining kidney. The prognosis is bad in the first case, and good in the others, but it is difficult to state at the beginning to which class it belongs.

J. TANTON.

Iljin, A. J.: The Question of Ascending Infection of the Kidney and the Prevention of the Same by Implantation of the Ureters into the Bowel (Zur Frage der aufsteigenden Niereninfektion und die Bekämpfung derselben bei der Ureteren-transplantation in den Darm). *Dissertation*, St. Petersburg, 1913.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

From a large amount of data in the literature and from his own experience, the author comes to the conclusion that transplanting the ureters into the bowel is better than transplanting them into the skin, while the danger of kidney infection is less. The cases in which ureteral implantation may be used may be divided into four groups as follows: (1) Diseases in which in addition to the ureteral implantation, the bladder must be extirpated, as in extrophy of the bladder, carcinoma of the bladder, carcinoma of neighboring organs in which the bladder also is involved, benign but frequently recurring tumors, and tuberculosis of the bladder with marked anatomical changes; (2) diseases in which ureteral implantation is performed without extirpation of the bladder, as in tuberculosis which is not accompanied by serious changes of the bladder, but which does not respond to the usual methods of treatment, and in high epispadias with insufficiency of the sphincter of the bladder; (3) diseases in which the ureteral implantation is indicated as a palliative operation, as in inoperable carcinomas, bladder tuberculosis with tuberculous kidneys, and generalized tuberculosis.

The infection of the kidney following transplantation of the ureters is primarily urogenous. It is favored immediately after the operation by the stasis of the urine in the ureters due in part to the reflex paralysis of the ureters and in part to constriction of the anastomotic ring and the bowel musculature, and to inflammatory infiltrations. Later on, after the ureters have recovered, it may be due to the lymphatic stream. The principal organism is the bacillus coli communis.

The author discusses eleven personal cases. In all, the operation was performed according to the method of Mirotworzeff of the Oppel clinic. Seven times it was for extrophy of the bladder, three times for high epispadias with aplasia of the bladder sphincter, and once for high grade tuberculosis. Ten of the operations were radical and one palliative. The latter cured the patient of his continual desire to urinate and of his pain. Seven patients were discharged cured and four died, one of peritonitis, one of shock, one of generalized tuberculosis, and one, two and one half years after the operation, as a result of sepsis following a plastic operation on the bowel. Excluding the last two cases, there remains an operative mortality of 18 per cent, both of the deaths occurring in children, aged one year and nine months, and one year and two months respectively. The author agrees with Maydl that the operation should not be performed on children. During the post-operative period, lactobacilline was given and was well tolerated by the patients. In three cases in which there was an inflammatory condition of the bowel, the result obtained was good, and in others the discharge of mucus ceased. In one case no effect was obtained. From the urine examinations following the operation it was found that there was a retention of the chlorides of the urine, attributable to a pyelitis acuta. A decrease in the excretion of nitrogen also occurred, due probably to the polyuria from which most of the patients were suffering. Uræmic symptoms were not observed. In four cases of post-operative pyelitis the vaccine therapy of Wright was employed, autogenous colon vaccine made from urine organisms being injected in small doses which were gradually increased. The maximum dose was 150 million bacteria. In two of the cases, cure resulted following six injections. One case improved, and in another the injections had to be discontinued on account of the continuous high temperature. In one case the vaccine was used as a prophylactic before the operation.

After the author had employed the vaccine on eighteen dogs experimentally, he came to the conclusion that it cannot prevent the ascending infection of the pelvis and kidney. The disease was more severe and set in earlier in those cases in which a stenosis of the anastomotic ring and a stasis of urine occurred. In cases in which the flow of the urine was free, the kidneys were found to be healthy even a long time after the operation. The monograph is accompanied by an extensive bibliography, three plates, and numerous drawings. O. VON SCHILLIN.

Condon, A. P.: Unilateral Septic Infection of the Kidneys. *N. Y. M. J.*, 1913, xcvi, 279.

By Surg., Gynec. & Obst.

Unilateral septic infection of the kidney is caused by the successful invasion into the kidney of micro-organisms and their products which usually produce numerous miliary abscesses and often violent general symptoms.

The writer reports two interesting cases, one a severe type demanding immediate operation and the other a milder form.

The origin of these infections is usually hæmatogenous. Predisposing causes are: (1) Pregnancy; (2) passive congestion of the kidney; (3) infections such as erysipelas, endocarditis, scarlet fever, etc. The exciting cause is a pathogenic micro-organism, usually the colon bacillus.

The symptoms appear suddenly, and consist of severe and continuous pain over the affected organ, marked tenderness, hyperæsthesia of the skin over the kidney, and rigidity of the lumbar muscles. There is usually vomiting, fever, rapid pulse, prostration and a high leucocytosis. The urinary findings vary; pathological findings may be absent; usually, however, there is pus, albumin, and microscopic blood.

The indications for operation are: (1) Intensity and progressiveness of symptoms; (2) high temperature; (3) leucocyte count above eighty, etc. Such cases should be operated upon at once. A few will undergo resolution and others will recover if properly drained. A radical operation, however, is usually indicated.

The writer mentions Brewer and Cobb as having done extensive work in the study of septic conditions of the kidney.

H. A. MOORE.

Papin: The Localization of Renal Tuberculosis by Radiography (Localisation de la tuberculose rénale par la radiographie). *Arch. urol. clin. de Necker*, 1913, i, 197. By Journal de Chirurgie.

Radiography sometimes shows at the site of a tubercular kidney, spots corresponding either to hollow spaces or calcareous or caseous areas. These spots may be of prime importance in deciding the question as to whether nephrectomy should be performed in the case of a subject who shows urinary tuberculosis but in whom the bladder cannot be explored on account of its sensitiveness. In such a case we can demonstrate that one of the kidneys is sound if Ambard's coefficient, the relation of the urea in the blood to that in the urine, is normal, but we still have to determine which is the normal kidney. If we have no other localized symptoms, radiography may settle the question. The author cites two cases in which, when the kidneys showed a spot in the radiographic picture, bladder exploration was impossible, and the Ambard coefficient was normal or subnormal, nephrectomy was performed successfully. MAURICE CHEVASSU.

Thomson, J.: The Infection of the Urinary Tract in Children by the Colon Bacillus. *Lancet*, Lond., 1913, clxxxv, 467.

By Surg., Gynec. & Obst.

On the basis of seventy-one personally observed cases of this kind, the author concludes that different types of colon infections are predisposing factors. He differentiates between the normal colon bacillus and the virulent organism. Any cause that retards

the downward passage of the urine is influential in inviting a colon bacillus infection. This infection is twice as common in children under two years as in those that are older. Seventy-nine per cent of the cases that he observed occurred in girls. During the first six months of life, however, a much greater number of boys than girls were affected. An analysis of cases of two hundred and twenty-four babies two years of age, reported by thirteen authors, shows that more boys were affected during the first six months than at any later age. The author claims, further, that the attacks in male patients are apt to be more severe than those in females and there is usually in the former a much larger proportion of cases of fatal pyelonephritis. He does not attempt to explain the reason for this.

The differential diagnosis of acute coli-pyelitis depends, first, on the presence of pus and colon bacilli in the urine along with the typical general symptoms which the author describes somewhat in detail, and, second, the absence of any sign of organic disease outside of the urinary tract that might account for the condition.

As treatment Thomson recommends, first, measures to cause the urine to become alkaline; second, the administration of antiseptics; and third, the use of serums and vaccines.

Glynn, E., and Hewetson, J. T.: Adrenal Hypernephroma in the Adult Female Associated with Male Secondary Characters. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1.

By Surg., Gynec. & Obst.

The case is reported of a woman forty-four years of age who for sixteen years has been showing a gradually increasing number of sex abnormalities. Her voice was coarse, her face and trunk hairy, and her breasts were of the male type. At the operation which was followed by her death, a twelve-pound tumor was removed from the region of the left kidney. Microscopical examination showed it to be of adrenal origin.

The authors compare the structure of this tumor with that of four similar tumors which they have had the opportunity to study. They classify all five as "adrenal hypernephromata" in contradistinction to "renal hypernephromata," and maintain that tumors of this type are not malignant.

Seven cases of adrenal hypernephroma in young adult females, associated with changes in sex character, are tabulated. Our knowledge of the relationship of such tumors to abnormal sex characters is summarized by the authors as follows:

1. In children, hirsuties and other abnormalities are almost invariably present.
2. In adult females before the menopause, sexual abnormalities are frequently present.
3. In females after the menopause definite sexual aberrations are not recorded.
4. In adult males such changes are not noted.
5. There is no evidence that hypernephroma in the kidney, which has a totally different histological

structure from that in the adrenal, is ever associated with abnormal sex character. G. G. SMITH.

Jachés, L.: Pyelography. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. By Surg., Gynec. & Obst.

There were two important epochs in the development of the röntgen diagnosis of diseases of the urinary system. The first began in 1898, when Leonard published his papers establishing the rules for the determination of the sufficiency of the röntgenogram in order to make a positive or negative diagnosis regarding urinary calculus; the second in 1905, when pyelography and cystography were introduced by Voelcker and von Lichtenberg.

Pyelography enables us to diagnose hydro-nephrosis, renal tuberculosis or tumor, the position of the kidney, and congenital anomalies, such as fused kidney, kinks, constriction or dilatation of the ureter, and diverticula.

Cystography shows the size and shape of the bladder, anomalies and pathological conditions, such as diverticula and trabeculations, and changes caused by hypertrophy of the prostate.

The dangers of pyelography are collapse due to over-distention of the renal pelvis, irritation of the kidney followed by high fever, and deposits of the silver salt in the kidney substance. Caution is advised where only one kidney is present or when the other kidney does not functionate properly. The dangers of pyelography were further illustrated in a case in which a diverticulum in the ureter could be demonstrated only by argyrol, and in which several months later the shadow of the diverticulum could be seen very distinctly. The patient refused operation, so that the question as to whether the silver salt had remained in the diverticulum all this time could not be solved.

Lantern slides were shown illustrating the various conditions named above.

In the discussion STOVER of Denver suggested that the shadow remaining in the region of the diverticulum may have been due to a calculus that was not shown before because of its chemical composition but which became visible as the result of absorbing some of the argyrol.

Legueu and Papin: The Technique and Accidents of Pyelography (Technique et accidents de la pyélographie). *Arch. urol. clin. de Necker*, 1913, i, 12.

By Journal de Chirurgie.

By pyelography the authors mean the injecting of a substance that is opaque to X-rays into the ureters and pelves of the kidneys before taking a picture. Legueu and Papin have worked on this for two years and report the method used, the results obtained, and the accidents met with.

They found that the best method is to inject ten per cent collargol through a ureteral catheter passed up to the pelvis of the kidney. Also that it is better to introduce the collargol by gravity from a curette 80 cm. above the patient than to force it in with a syringe. When the pelvis is full

there is pain in the back and no more fluid should be used. The fluid must remain in until after the radiograph is taken. It is not necessary to wash it out.

By pyelography it is possible to demonstrate the exact location of the pelvis of the kidney, its relations to the ureter, and the presence of curved ureters, double ureters, hydronephrosis, tumors, stones (the latter especially if oxygen is used instead of collargol), tumors, tuberculous cavities, etc. In short, it is invaluable in the diagnosis of renal troubles and of lesions of the pelvis or ureters.

Pyelography may be accompanied by pain which lasts for several hours or even days afterward and which may resemble kidney colic. Small doses of morphine and hot compresses in the lumbar region, however, give relief. There is also sometimes a slight fever (38° to 39° C.) lasting for two or three days. Sometimes there is infiltration of the renal parenchyma, which may be seen by radiography and upon operating. This in one case caused death (Rössle). Legueu and Papin believe it to be due to the use of too great pressure in administering the collargol, for they have had no such trouble since they stopped using a syringe.

MAURICE CHEVASSU.

Von Illyés, G.: Experiences in Renal Surgery (Erfahrungen auf dem Gebiete der Nierenchirurgie). Budapest: Franklin, 1913.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In this monograph the author describes three hundred and forty-nine kidney operations that he performed during a period of eight years. The diagnostic and operative methods are minutely described, and the work is full of practical hints. The operative results are noteworthy. There were twenty-four cases of tumor with 16.6 per cent mortality; seventy-five cases of kidney and ureteral calculi, with a mortality of 60.6 per cent; twenty cases of hydronephrosis with a mortality of 0 per cent; twenty-five cases of pyonephrosis with a mortality of 20 per cent; sixteen cases of pyelonephrosis, with a mortality of 20 per cent; sixteen cases of pyelonephritis and kidney abscess, with a mortality of 0 per cent; and 141 cases of tuberculosis, with a mortality of 4.2 per cent. The end-results of the last, however, showed a mortality of 17.4 per cent. There were three cases of anuria, one of syphilis of the kidney, one of cystic degeneration. Of floating kidney there were fifteen cases, with no mortality. Nine exploratory operations had no mortality. Perinephritis fibrosa, five cases, and perinephritic abscess, three cases, had no mortality. The average mortality was 17.2 per cent.

VON LOBMAYER.

Gibbon, J. H.: The Technique of Nephro-, Pyelo-, and Ureterolithotomy. *Ann. Surg., Phila.*, 1913, lviii, 232.
By Surg., Gynec. & Obst.

Nephrotomy is the operation of choice only for large, branching, phosphatic stones, for small stones

lodged high up in the calices, and for cases in which the kidney is badly infected; in other cases pyelotomy is preferred. For the removal of multiple, widely distributed stones, the author prefers making several incisions directly over the calculi instead of splitting the entire kidney.

Pyelotomy is favored for the removal of most renal calculi. The fat overlying the pelvis and the pelvis itself should be incised longitudinally in different planes, and at the conclusion of the operation they should be sutured separately. There is little danger of urinary leakage when this plan is followed.

If stones in the lower part of the ureter are not easily located by the extraperitoneal route, the author at once resorts to the transperitoneal method of approach, using this, however, only for the purpose of locating the stones and pushing them into a position where they will be accessible through the extraperitoneal wound. This method promotes speed in operating, gives an opportunity to thoroughly explore both ureters, and has been found to be safe.

S. W. MOORHEAD.

Bromberg, R.: A Contribution to the Functional Diagnosis of the Kidney (Beitrag zur funktionellen Nierendiagnostik). *Beitr. z. klin. Chir.*, 1913, lxxv, 411.
By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

Löwenhardt was the first to call attention to the value of determining the electrical conductivity for the functional diagnosis of the kidney. The method has rendered very good results as has been stated several times by Kümmell. Bromberg employs a slightly modified apparatus for measuring the electrical conductivity, and emphasizes particularly the value of comparing the electrical conductivity of the blood serum and of the urine of both kidneys. According to the author, this hæmorenal index is the only method by which the functional activity of the kidneys can be determined absolutely.

OEHLCKER.

Scott, G. D.: Hydronephrosis Produced by Experimental Ureteral Obstruction. *J. Indiana St. M. Ass.*, 1913, vi, 339.
By Surg., Gynec. & Obst.

Scott describes and draws conclusions from original experiments performed upon some fifty dogs. He found that hydronephrosis can be obtained from both complete and partial ureteral obstruction, the degree depending upon the duration of the obstruction. Complete obstruction was the more rapid in development.

The pathological changes were due to the back pressure of the retained fluid on the kidney epithelium and to the poor nutrition resulting from pressure on the renal vessels. The tubules were dilated; the epithelium was flattened and its cytoplasm became granular; the interstitial tissue was increased; and in late stages the vessels were sclerotic. In hydronephrosis even of the latest stage, the kidney epithelium was capable of regeneration.

C. D. PICKRELL.

BLADDER, URETHRA, AND PENIS

Legueu: Foreign Bodies in the Bladder and Their Treatment (Fremdkörper in der Blase und ihre Behandlung). *Allg. wien. med. Ztg.*, 1913, lviii, 176. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author reports the removal of a hairpin from the bladder of a young girl, and discusses the symptoms of foreign bodies, especially hairpins, in the bladder, pointing out the most appropriate treatment. For diagnosis the X-ray should not be depended upon entirely, but each case should, if possible, be cystoscoped. Extraction without the aid of the cystoscope, by means of a hook or similar instrument, usually fails, since the pin generally lies transversely and it is quite difficult to hook into its closed end.

Even with the aid of the cystoscope the author found it so difficult to remove the pin that he advises suprapubic incision. In the female if the foreign bodies are smaller and not encapsulated, the author makes an incision about 2.5 cm. in length beneath the symphysis and between the clitoris and urethra. This incision extends to the bladder, and the urethra is opened along its whole length without injuring the collum vesicæ. After the foreign body has been extracted the incision is sutured and it heals without the formation of a fistula. DENCKS.

Bugbee, H. G.: The Relief of Vesical Obstruction in Selected Cases. *N. Y. St. J. Med.*, 1913, xiii, 410. By Surg., Gynec. & Obst.

The author suggests the use of the high frequency current applied in the same manner as proposed by Beer in the destruction of vesical papillomas, to burn away obstruction at the bladder neck, and for cases of enlarged prostates and median bars. He reports fourteen cases of various kinds of obstruction in which the obstructing part was burned away or through, and in which he reduced the residual urine. The article has numerous illustrations which show the marvelous manner in which the obstructing portion disappears. B. S. BARRINGER.

Legueu: The Electro-Coagulation of Tumors of the Bladder (De l'électro-coagulation des tumeurs de la vessie). *Arch. urol. clin. de Necker*, 1913, i, 131. By Journal de Chirurgie.

Excision is the treatment of choice for tumors of the bladder of any considerable size, but for extremely small tumors or for small recurrent nodes the endovesical treatment is distinctly preferable.

Legueu has studied the action of high frequency currents on tumors of the bladder, using both Beer's method, which has a coagulating and diathermal effect, and the method of d'Heitz-Boyer and Cottenot, which has a disintegrating action. The two methods seemed to him to be about the same in their action as well as in their results. He prefers Beer's method, however, as it does not require a special cystoscope. He has had an electrode made the size of a ureteral sound which can be

passed through any cystoscope. It ends in a copper button through which the diathermal current is passed by means of a d'Arsonval bipolar apparatus.

The action of the diathermal current is described in detail. The author studied it histologically on a tumor treated by electro-coagulation immediately before it was excised.

He gives his patients a treatment of five minutes duration every two weeks, with a current varying in intensity from 250 to 350 milliamperes. It is useless to give the treatments closer together, for the elimination of the coagulated particles takes a considerable length of time. He used the method five times for palliative treatment and noted that it caused a diminution or cessation of hæmorrhage. Five times he used it for curative purposes: two tumors were cured after five treatments, one after six treatments, one almost cured after six treatments, and one was very much decreased in size after the sixth treatment.

The application of high frequency currents in the treatment of tumors of the bladder constitutes a great advance in endoscopic technique.

MAURICE CHEVASSU.

François, J.: Transformation of a Cystic Cystitis into a Glandular Cystitis (Sur la transformation de la cystite kystique en cystite glandulaire). *J. d'urol.*, 1913, iv, 207.

By Journal de Chirurgie.

François made an histological study on a surgical specimen of the transition from a cystic cystitis to a glandular cystitis.

The patient, a woman of 33, entered the hospital for a very intense cystitis with frequent and abundant hæmaturia. The urine was purulent and the capacity of the bladder was reduced to 60 ccm. The kidneys were normal.

The cystoscope showed the fundus red and tomentous in places. Clinically there was an intense, non-bacillary cystitis without involvement of the kidneys.

Operation showed the mucous membrane of the whole trigonum surrounding the openings of the two ureters, red, ulcerated, irregular and tomentous. The right urinary meatus was swollen, red, and somewhat patent. All of the diseased mucous membrane was destroyed by thermocautery. A month later the patient had recovered, and the capacity of her bladder had reached 200 gms.

Histological examination: At the edge of the tomentous area, full and sphenoidal von Brunn epithelial nests were found in the submucous layer; as the center of the tumor was approached these nests showed a hollow central cavity and the cells bordering the cavity were of the secretory type. In the center of the tumor the mucous membrane had almost entirely disappeared; there were some cystic formations in the submucosa, but the most characteristic appearance was given by mucous glands bordered with a single row of cylindrical cells, resembling the mucous glands of the intestine.

These formations are characteristic of glandular cystitis. The transformation of the polyhedral cells of the vesical epithelium into secretory cells which ultimately take on the characteristics of mucous cells could be observed.

Along with this process, mucous cells appeared and multiplied in the covering of the epithelial crypts; that is, a certain area of normal stratified vesical epithelium was transformed into a layer of cylindrical cells which were nothing more than mucous cells. The inflammatory lesions of the submucosa were greatest in the zone of glandular cystitis and less intense in the zone of cystic cystitis.

Calculi, neoplasms, chronic cystitis—in short, any chronic irritation, as Chiari has shown experimentally—may give rise in the lower part of the vesical epithelium to von Brunn's epithelial nests and the cysts which result from them.

The glandular formations may have either one of two origins: they may be due to an embryonic inclusion of germinal cells from the intestinal tract, as is the case in pure glandular cystitis without cystic cystitis at the periphery, or to the transition of vesical epithelium into mucous cells passing through the stage of cystic cystitis.

J. TANTON.

GENITAL ORGANS

Eckels, L. S.: Epididymotomy, the Radical Operative Treatment of Epididymitis. *J. Am. M. Ass.*, 1913, lxi, 470. By Surg., Gynec. & Obst.

Eckels is firmly convinced of the desirability of the operative treatment in every case of acute epididymitis. His opinion is based on the observation of one hundred operated cases, of which he operated upon twenty-five. He lays emphasis on the marked absence of relapse in the cases so treated, and believes, while admitting a lack of definite proof, that sterility is largely obviated by surgical treatment. He gives a clear description of the operation, which is a simple and harmless procedure.

His conclusions in regard to this operation are as follows: (1) The relief from pain is instantaneous. (2) The internal administration of sedatives and opiates and loathsome external applications are made unnecessary. (3) The abatement of fever takes place in from twenty-four to forty-eight hours. (4) Pus and abscess formation is prevented. (5) Swelling, tenderness, and other symptoms rapidly disappear. (6) There is no tendency to relapse. (7) Only a minimum of time is lost from usual activities. (8) The percentage of cases of sterility following the disease is probably reduced.

J. DELLINGER BARNEY.

McCrae: Remote Effects of Lesions of the Prostate and Deep Urethra. *J. Am. M. Ass.*, 1913, lxi, 477. By Surg., Gynec. & Obst.

Lesions of the prostate and deep urethra are so frequently responsible for symptoms elsewhere, often in remote points of the body, that more frequent routine examinations of these organs are

necessary. The symptoms may be sexual, urinary, or referred. The writer discusses these various disturbances and reports a case of marked cardiac and gastric disorders that was unsuccessfully treated in many ways until the verumontanum was examined. The latter was found to be the real source of the reflex processes and was cured. Referred pains may occur in the legs or lower abdomen, and may simulate many conditions, all the more because there is no regularity in their distribution.

Chronic arthritis, impairment of kidney function, myocardial changes, even angina pectoris, are also associated with prostatic lesions and this possible relationship must not be lost sight of.

FAXTON E. GARDNER.

Kümmel, H.: The Diagnosis and Treatment of Early Malignant Disease of the Prostate. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Kümmel discusses the present status of the question concerning the diagnosis and treatment of malignancy of the prostate gland in its initial stages.

Three points are enumerated as being essential for the definition of the term "initial stage"; i. e., (1) the malignant tumor must be confined to the gland proper, and there must be no involvement of the vesical mucosa or of the periprostatic tissue; (2) neither the anamnesis nor the subjective complaints nor the symptoms elicited by examination must furnish any material pointing to a dissemination into any other part of the anatomy from the original focus; and (3) it must be possible to remove the malignantly degenerated gland by any of the operative methods in use for the removal of a simply hypertrophied prostate.

Reviewing all of the available statistics, the author arrives at the conclusion that malignancy in the enlarged prostate is of a much higher frequency than has been believed heretofore.

Judging from his own experience and from the reports of other authors, Kümmel feels justified in formulating the thesis that a cancer may develop in an originally benign hypertrophy and that it is therefore imperative that in every case of hypertrophy of the prostate accompanied by pronounced symptoms, the possibility of malignancy be thought of.

The diagnosis that is the earliest possible recognition of the malignancy of a prostatic tumor is the most important and, at the same time, the most difficult problem encountered in the whole question. While it has to be admitted that the diagnosis of a cancer in the initial stage cannot be made with absolute certainty, still it is a matter of experience that in a vast majority of the cases of this kind the diagnosis can be established with a probability that is very close to certainty.

As leading symptoms in the recognition of prostatic cancer in its initial stage are quoted the sudden appearance of marked dysuria, irradiating pains

that have their beginning in the prostatic region, a characteristic hardness of the gland either extending over the entire tumor or restricted to certain regions of the gland, and extreme sensitiveness to touch of the parts involved.

As the method for operation the author recommends the suprapubic route. For patients who show symptoms of insufficiency of the renal function, the two-step operation is preferred, as it gives the kidneys a chance to recover after sufficient drainage has once been established.

The author sums up his conclusions as follows:

Cancer of the prostate is a relatively frequent disease; apparently simply hypertrophied glands show malignant degeneration in from twelve to twenty-three per cent of all the cases, the figures varying according to the different material of the different authors.

Cancer of the prostate shows a decided inclination to form metastases in the bones; however, a great many cases come under observation in which, during the early stage, the cancer remains confined entirely to the prostate gland.

Cancer of the prostate in its early stage may be diagnosed in the majority of cases with near certainty and in a smaller number of cases with great probability. In only a few cases will the diagnosis remain very uncertain.

The statistics of the operations prove that lasting results of eight years' duration are within our reach; in a great number of cases the condition of the patients remained satisfactory after the operation for a varying time until the relapse became manifest.

Considering that prostatic cancer in many cases remains during the initial stage an entirely local process, and that in the majority of the cases the malignancy may be recognized, it is imperative to arrive at such a diagnosis as early as possible and to attempt a radical cure by an early operation.

Considering that not only may a cancer develop in a so far normal gland, but that apparently in the majority of cases it becomes established in an already hypertrophied gland, an early removal of the prostate is to be recommended in every case of hypertrophy, if the slightest suspicion of malignancy is aroused.

The reported lasting operative results extending over periods from three to nine years seem to prove that an early operation is apt to furnish a radical cure for prostatic cancer.

In the early stage of prostatic cancer the ordinary methods employed in the removal of a hypertrophied gland are sufficient; more extensive operations are not required in the initial stage.

In case of insufficient renal function, the two-step operation should be given the preference as it is the least dangerous procedure. In order to prevent the occurrence of relapses, radiotherapy should be employed following the eradication of the gland; relapses should be treated in the same manner.

G. KOLISCHER.

Deaver, J. B.: Prostatectomy. *Surg., Gynec. & Obst.*, 1913, xvii, 157.
By Surg., Gynec. & Obst.

The enucleability of hypertrophied prostates is largely dependent upon the pathological change that is present in the particular case. The encapsulated and therefore enucleable adenomatous masses, markedly enlarged in the vertical axis and for this reason more accessible from above, are removed with surprising ease by the suprapubic route. The dense, fibrous type, which comprises about 15 per cent of benign hypertrophies, lacks not only this comparative accessibility, but, what is of greater importance, lacks also an excapsulation that permits of its being shelled out.

The cystoscope is the most valuable means of determining the most appropriate operative procedure. By its use we learn the relation of the enlarged gland to the internal vesical orifice and the degree of intravesical projection; also the condition of the bladder mucosa, the presence or absence of diverticulation, the location of calculi, their size and shape and whether free or encysted. All of these factors influence to a degree the choice of operative procedure.

Benign hypertrophies of the prostate are indistinguishable from carcinoma in its early stages. In all cases of acute or chronic retention that are impossible to catheterize, in severe cystitis, and in all cases in which for any reason it is impossible to form a fair estimate of renal function, we must limit ourselves to the drainage operation, reserving prostatectomy for future consideration.

Our advocacy of the suprapubic route is tempered with the principle that successful prostatic surgery depends upon one's ability to recognize the types best suited for, and one's skill to perform, either operation. Where the prostate is doubtfully malignant, tubercular, or the seat of incurable gonorrhœa, and where there is benign scirrhous enlargement — in all of which conditions the gland is non-enucleable because it is not encapsulated and is difficult or impossible to reach from above; the normal capsule and sheath are inseparably adherent and bound down to the surrounding levator ani muscles and pelvic fascic; and the bladder is small in capacity and has rigid walls — prostatectomy can be performed successfully only by the perineal route.

Hæmorrhage following operation is usually insignificant in amount and easily controlled with hot irrigations, but in the event of excessive bleeding the prostatic cavity must be packed with gauze.

The drainage tube should be of large calibre and so placed that the siphonage of the bas-fond is proven perfect before the patient leaves the table. The tube must have lateral and terminal openings to lessen the danger of its obstruction by a fold of mucous membrane. In exposing the bladder, a point of much practical importance is incision of the prevesical fat rather than the tearing through of this structure.

Uræmia and suppression of urine occur at times in spite of careful selection of cases and judicious

judgment both before and after operation. Hicoughing and nausea are the danger signals.

Cabot, H.: Suprapubic Prostatectomy. *Surg., Gynec. & Obst.*, 1913, xvii, 213.

By Surg., Gynec. & Obst.

This paper is a discussion of the anatomical basis for the operation of prostatectomy.

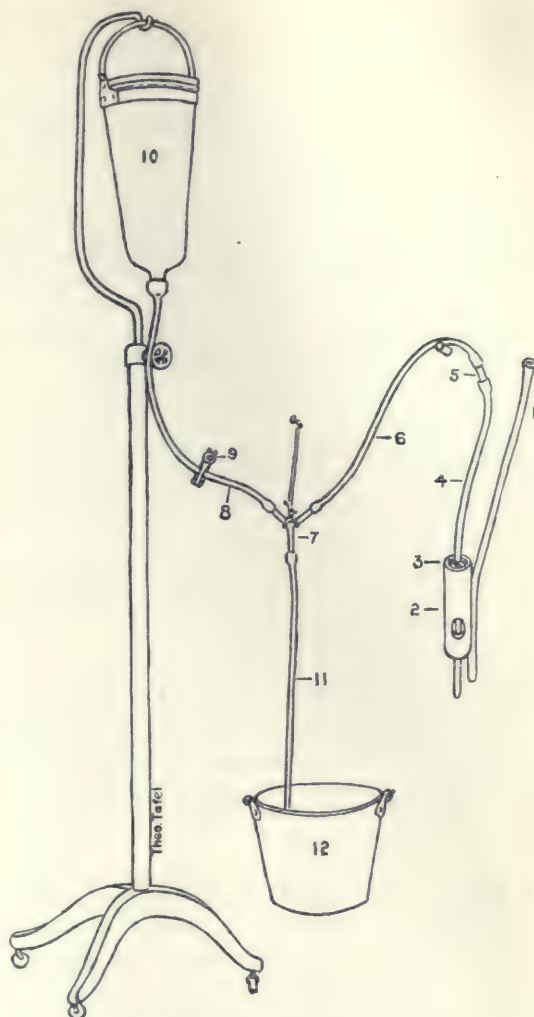
Consideration is confined to the class of cases of enlargement that is ordinarily spoken of as hypertrophy. This process is not to be regarded as true hypertrophy but as due to the formation of adenomatous nodules involving only certain lobes of the gland. Stress is laid on the fact that these adenomas do not involve the posterior lobe. The adenomatous masses which arise from the lateral and median lobe are covered on their urethral surface only by thinned true capsule and atrophied mucous membrane, from within which they cannot be enucleated even by dissection. The author shows that in the operation of prostatectomy performed by any method, only the adenomatous masses in the lateral and median lobes are removed and that the posterior lobe is not enucleated. He then compares the method of intra-urethral enucleation, whether done from above through a suprapubic incision or from below by opening the urethra in the membranous portion, with the operation of Young, which attacks the adenomas through incisions on the posterior surface of the prostate. By the intra-urethral method the adenomatous masses are removed easily and completely without damage to the posterior lobe. By the operation of Young the removal of the lobes from under the thinned capsule and mucous membrane is exceedingly difficult and often incomplete. Furthermore, in Young's operation the structures of the posterior lobe are necessarily damaged extensively.

The author therefore is of the opinion that Young's operation cannot properly be regarded as a conservative method. The suprapubic method of approach is open to fewer objections on the ground of unpleasant sequelæ such as fistulæ and lack of urinary control than is the perineal approach, and accordingly is to be preferred.

Day, G. H.: A Modified Drainage for Suprapubic Prostatectomy. *N. Y. M. J.*, 1913, xcvi, 425.

By Surg., Gynec. & Obst.

The author has suggested a modification of Dawbarn's system syphonage for suprapubic drainage. In using the Dawbarn system, the author passes the bladder catheter through the center of a Marion



1, Catheter for irrigating purposes. 2, Marion tube. 3, Metal stopper. 4, Drainage tubing. 5, Glass connecting tubing. 6, Soft rubber drainage tubing. 7, Glass. 8, Irrigating tubing. 9, Regulating cut-off. 10, A large irrigator. 11, Irrigating tubing. 12, Receptacle for waste. (Day.)

suprapubic tube before he begins the syphonage. If he wishes bladder irrigation in addition, he simply irrigates through the small tube attached to the side of the Marion tube.

B. S. BARRINGER.

SURGERY OF THE EYE AND EAR

EYE

Robertson, E. N.: The Present Approved Methods of Treatment of Obstructions to the Lacrimo-Nasal Duct. *J. Kansas M. Soc.*, 1913, xiii, 279.
By Surg., Gynec. & Obst.

Robertson discusses the treatment of obstruction of the nasal duct and sums it up as follows:

"The majority of all cases of lacrimo-nasal obstruction, in the beginning, can be relieved by very simple measures.

"Syringing with mild astringent antiseptic solutions should always be tried faithfully, even in those cases where a mucopurulent discharge from the sac is present.

"It is better as a rule not to open an acute dacryocystitis through the skin. More satisfactory final results are obtained by letting the pus out through the canaliculus, or by the incision of Agnew, followed by the use of the probe.

"Rapid dilatation by the method of Ziegler is sufficient to effect a cure in many cases formerly made tedious by probing.

"Good results can be accomplished by probing in selected cases if the patient will stand for it.

"When quick relief to chronic dacryocystitis is desired, extirpate the lachrymal sac."

C. G. DARLING.

Coats, G.: Infarction of the Posterior Ciliary Arteries. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

Coats describes the pathological details of two cases in which a wedge-shaped portion of the inner layers of the sclera at the posterior pole was necrotic. A somewhat larger area of the choroid, and a still larger area of the retina, were similarly affected. There was no fusion of the choroid and retina, but a moderate amount of infiltration was present in the surrounding tissues. In the divided eye the area appeared as an atrophic patch 8 to 10 mm. in diameter. It had not been seen with the ophthalmoscope, the cases showing clinically the symptoms of a chronic iridocyclitis. The author points out that the pathological features of these cases differed from those of an ordinary patch of choroidoretinitis in the great preponderance of the necrosis over the inflammatory reaction, and in the absence of fusion of the two tunics. An inflammation severe enough to give rise to such a degree of necrosis must have been accompanied by a large amount of plastic exudation, whereas, as a matter of fact, the signs of inflammation were quite moderate. Therefore the necrosis must have been due only to a cutting off of the blood supply. This supposition was accompan-

ied by the localization of the patch which corresponded well with the distribution of a main posterior ciliary artery. The condition was indeed an infarction of a posterior ciliary artery, and it had the wedge shape which is usual in infarctions elsewhere.

Infarctions of this kind give rise to toxine which cause a certain amount of inflammatory reaction in the surrounding tissues, leading to encapsulation and penetration of the dead tissue with organizing material. In the cases reported it is probable that similar substances diffused forwards through the vitreous, and gave rise to the iridocyclitis which was the chief clinical symptom. It might seem surprising that necrosis *en masse* should occur in so vascular a tissue as the choroid, but it should be remembered that the vitality of a tissue after the obstruction of its blood supply depends not simply on its vascularity, but also on the freedom with which blood from collateral sources can be poured into it. Thus the kidney and spleen are highly vascular organs, but owing to peculiarities in the distribution of their vessels, are subject to infarction. Similarly, in the choroid it had been shown by Leber that the larger ciliary arteries have few branches of communication. The necrosis of the retina, which has a blood supply of its own, is easy to account for. Probably the element of suddenness had something to do with the matter, and perhaps the toxins produced by the necrotic tissue were not without influence. A similar complete necrosis is found on dividing the posterior ciliary arteries in the rabbit.

The presence of necrosis in bulk proved that the obstruction must have been sudden, for gradual blockage of ciliary vessels produces a different and sufficiently well known set of phenomena. The block therefore could not have been due to endarteritis alone, but must have been caused either by thrombosis or embolism. Unfortunately, no details are available as to the cardiac condition of the patients.

Harman, N. B.: The Results of the First Hundred Squint Cases Operated Upon by the New Method of Subconjunctival Reefing and Advancement, with Lengthening of the Antagonist where Necessary. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

In this operation the tendon is not cut or exposed to view. The upper and lower edges are cleared by two button-holes cut through the conjunctiva and capsule. The tendon is freshened by a rasp. Special forceps of simple design are then passed into the button-holes to secure the tendon. The movement

of the forceps folds the tendon into plaits. The ree is sewed up or advanced as the case indicates, or the antagonist is lengthened by a graduated partial tenotomy.

The steps of the reefing advancement are as follows: (1) The eye is secured with an anchor stitch placed at the limbus in the axis of the tendon to be shortened; (2) the position of the tendon is noted; it is pointed out that there are well-defined surface markings and color differences; (3) the button-holes are cut above and below the tendon edge close to the canthus; (4) the tendon is lifted and both surfaces are rasped with the instrument provided; (5) reefing forceps are applied, adjusted to the extent of shortening required, and rotated; (6) the reef is sewed up by the blanket stitch; and (7) the reef is advanced by fixing stitches into the limbus.

The author points out that attempts to secure a large effect by shortening one tendon caused permanent enophthalmos. This was preventable by lengthening the antagonist, which was done by a graduated partial tenotomy — the "jigsaw" operation. The tendon was exposed, secured in "director-forceps" which checked the bleeding and afforded a marked guide to the incisions. Three cuts were made, one severing two thirds of the middle cut. The tendon thereupon extended lengthwise without loosening its attachments or alignment. The author shows how the cuts can be varied so as to secure vertical deviation also.

Results: Of the first 100 serial cases including the earlier experimental operations, the results obtained after an average interval of nine months were: Binocular vision, 4; straight, 36; error less than 3 degrees, 22; error 5 degrees, 23 (these make 85 per cent successes); error 10 degrees, 9; error from 10 to 20 degrees, 4; relapse six months after operation during severe keratitis, 1, and overcorrection found six months after operation, 1.

The technique of the operations was demonstrated on a dummy devised for the purpose.

Bulson, A. E.: The Cause and Treatment of Convergent Squint. *J. Indiana St. M. Ass.*, 1913, vi, 357.

By Surg., Gynec. & Obst.

Bulson reviews the cause and treatment of convergent squint and states that the proper treatment includes: (1) The recognition of the necessity of giving attention at the beginning of the squint. (2) The correction of the refractive error. (3) Orthoptic training. (4) Operative treatment. He then takes up these points in detail. C. G. DARLING.

Heath, F. C.: Sympathetic Ophthalmia with Recovery. *J. Indiana St. M. Ass.*, 1913, vi, 364.

By Surg., Gynec. & Obst.

Heath reports the case of a man whose eye had been injured by a piece of steel which was removed from the vitreous thirteen days after the injury by means of a magnet. Two weeks later the eye was enucleated. Four days later the good eye became

inflamed. There were pigment spots on Descemet's membrane and vitreous opacities. A few days later the eye was much worse. There was marked oedema and severe pain. Vision was nearly abolished.

The treatment given was sodium salicylate, 360 grains a day, inunctions, and finally a hypodermic of pilocarpine grains .1 and nitroglycerine grains .01. During the period of treatment atropine and dionin were used locally. The day following the hypodermic, the patient was salivated and great improvement took place in the eye. The treatment was continued until vision was normal. C. G. DARLING.

Smith, P.: Glaucoma Operations. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The report shows the extent to which the newer operations for glaucoma have supplanted the classical iridectomy in the practice of British ophthalmic surgeons. In the autumn of 1912 the author addressed an inquiry on the subject to all members of the Ophthalmological Society of the United Kingdom excepting those known to do no operative work. The replies showed that iridectomy, variously executed, still holds an almost undisputed place in the treatment of acute glaucoma, but that in chronic glaucoma operations expressly designed to establish a subconjunctival fistula or filtering cicatrix, and pre-eminently sclerocorneal trephining, have replaced it to a very large extent. Evidence for and against the various procedures is given.

Roy, D.: Observations on Operations for Glaucoma. *South. M. J.*, 1913, vi, 525.

By Surg., Gynec. & Obst.

Roy discusses some of the operations for glaucoma and reports good results in the three cases on which he performed Borthen's operation for iridotaxis. He says:

"These results, while few in number, have been so gratifying and so much better than I had obtained previously with the operation of iridectomy that I must say I hold the operation in high esteem. The simplicity of its technique and the absence of all signs of irritation following the same certainly commends it to the inexperienced operator. The only criticism that could be made is the fact it has not been tried long enough to satisfy us as to its permanent value, and the fact that a prolapsed iris is supposed to make a dangerous eye, especially in producing a sympathetic ophthalmitis. In none of Borthen's cases was there the slightest trouble."

C. G. DARLING.

EAR

Dench, E. B.: Two Cases of Loss of Caloric Vestibular Reaction, with Operative Findings. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The first case was that of a woman, twenty-four years of age, who had suffered from a chronic middle-

ear suppuration since childhood. There was a history of an acute exacerbation of the aural symptoms two weeks before the patient came under observation. The symptoms comprised severe pain in the ear, tinnitus, dizziness, nausea, and vomiting. The nausea and vomiting were severe at first, but gradually disappeared. The patient was unsteady on standing, and, apparently, fell backward and to the affected side. All other signs were negative. The caloric reaction upon the affected side was noted when the patient was admitted to the hospital, but twenty-four hours later the left labyrinth did not react. Twenty-four hours after admission the patient had a tendency to fall on walking and jumping to the side opposite to the lesion. On account of the sudden loss of the caloric reaction, an increase in the dizziness, and a gradual rise in temperature to nearly 101° , it was decided to perform the radical operation. At the time of the operation a fistula was found in the horizontal semicircular canal, and the oval window also was found open. A complete labyrinth operation was performed according to the Neumann method, and an uneventful recovery resulted.

The second case was that of a boy, fourteen years of age, who had had a discharge from the right ear for six months. As the result of local treatment, this discharge ceased four months after its appearance. Six months after it was first noted the patient returned to the hospital, complaining of severe pain in the right ear and above the insertion of the sterno-mastoid muscle. There was no discharge from the ear. He complained also of headache and dizziness. The left ear was practically normal. There was some granulation tissue in the right tympanic cavity. The boy was admitted to the hospital and the granulation tissue was removed. There was practically no rise in temperature. A caloric test at the time of admission to the hospital showed a normal labyrinth upon each side. The granulation tissue from the right tympanic cavity was removed, and twelve hours later the temperature was 104° . It remained at this level for eight hours. An examination of the right labyrinth showed a negative reaction to the caloric test. Cerebrospinal fluid obtained by spinal puncture was found to be normal by both a cytological and a chemical examination. A blood culture showed streptococci in the blood.

On account of the high temperature, and the absence of meningeal symptoms, a radical operation was performed. The lateral sinus was exposed and found to be filled with an old clot. The internal jugular was excised from a point just below the omohyoid muscle to the base of the skull. The sinus was thoroughly opened and curetted until free hæmorrhage occurred from both the torcular and the bulbar extremities of the sinus. The temperature fell after the operation, and certain pulmonary symptoms, indicative either of a beginning pleurisy or a beginning pneumonia, appeared. This seemed to account for the slight rise in the tempera-

ture, for the cerebrospinal fluid remained normal. On the fifth day after operation there was a sudden rise in the temperature, and cultivation of the fluid showed long chains of streptococci. On the following day a lumbar puncture showed globulins in excess, and pus, blood, and streptococci in the cerebrospinal fluid. A complete labyrinth operation was then performed. Immediately after the operation the temperature fell, but the patient died suddenly, with the symptoms of pulmonary embolism.

The first case demonstrates the satisfactory results of prompt operative interference in cases of beginning acute labyrinthitis.

In the second case the lesion was a mixed lesion; that is, there was a sinus thrombosis of long duration, and a sudden involvement of the labyrinth with extension to the meninges. The author believes there is no question but that the labyrinthine involvement was secondary to the jugular thrombosis. The infection probably spread either through the aquæductus vestibuli or the aquæductus cochleæ which lie in close proximity to the lateral sinus and the jugular bulb. The operative interference in the second case would probably have been successful had not pulmonary embolism occurred.

Shambaugh, G. E.: When to Operate on the Labyrinth in Labyrinth Infection Secondary to Purulent Otitis Media. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 303. By Surg., Gynec. & Obst.

The author states that in view of the fact that accurate observation of cases of labyrinth infection is still comparatively new, and that a large number of cases of labyrinth empyema recover spontaneously, it is difficult as yet to lay down definite indications for operation to cover all cases.

He considers a labyrinth operation clearly indicated in cases of labyrinth suppuration where a beginning intracranial complication has developed; when it is part of an acute or chronic suppurative otitis media and there are indications for a mastoid operation; and in cases complicated by an erosion of the labyrinth capsule, fistula formation into the labyrinth, facial paralysis, or sequestration of a part or of the whole of the labyrinth capsule.

ELLEN J. PATTERSON.

Botey, R.: The Trephination of the Labyrinth for Vertigo and Buzzing in the Ear (Le trepanation du labyrinthe pour vertiges et bourdonnements). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Operations on the labyrinth for non-suppurative affections of the semicircular canals and cochleæ have not become general. Botey discusses the value of such operations. In patients affected with vertigo and intolerable buzzing in the ears, the lesion is generally in the termination of the cochlear division of the nerve in the cochlea or of the vestibular branch in the ampulla. In such cases, operation on the vestibule and cochlea is effective, and the author describes two cases of his own which were

thoroughly successful. On the other hand, the seat of the trouble may be in the auditory nerve at the base of the brain, in which case a labyrinthine operation will do no good. Botey describes a case of his own, which was unsuccessful. The patient had syphilis. The majority of the cases with a central lesion are syphilitic. Intracranial section of the auditory nerve has been suggested and carried out in a few cases. Three cases are cited in which there was only slight relief or recurrence. In view of the danger of the operation and the small hope of success, he considers that this procedure is not justified. He approves of the operation on the labyrinth, as it is not dangerous, and believes that it should be performed when the condition has not yielded to a reasonably long period of treatment and when the patient must work.

Botey, R.: Anatomical Preparations to Illustrate Trephining of the Labyrinth (Quelques préparations anatomiques de trépanation du labyrinthe). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Botey makes anatomical preparations of the temporal bone which he uses in his classes to illustrate the various operations on the labyrinth. The places of opening are painted in red and the cavities of the labyrinth are tinted blue. Twelve preparations are described, demonstrating:

1. Old method. Trephining of the horizontal canal through the the fenestrum ovale with enlargement of the latter.
2. Jansen-Neumann method. Resection of the posterior wall of the petrous portion; opening of the canals and of the vestibule. Sigmoid sinus indicated.
3. Bourguet's method. Separate opening of the external, posterior, and superior canals. Opening of the vestibule and cochlea through the tympanum.
4. Botey's method. Opening of the ampulla of the external canal, of the posterior canal, of the posterior wall of the vestibule, of the anterior extremity of the superior canal. Defenestration.
5. Hautant's method. Opening of the ampulla of the external canal and of the vestibule from behind.
6. Ruttin's method. Tunneling behind mastoid, opening of the posterior wall of the vestibule. Defenestration.
7. Opening of the vestibule from behind, and of the ampulla of the external canal, the anterior extremity of the superior canal and the vestibule and cochlea through the tympanum.
8. Opening of the vestibule through the tympanum, without defenestration and after extensive chiseling out.
9. Opening of the external canal and the vestibule from behind after antrotomy without chiseling or defenestration.
10. Opening of the vestibule from behind without defenestration, leaving the ossicles and the external wall of the attic intact.
11. Atypical operation (unpublished case). Opening of the vestibule after resection of the posterior wall of the petrous portion on account of lack of room. Opening of the middle cerebral fossa (abscess). The sigmoid sinus is prolapsed.
12. Specimen demon-

strating the liability of injuring the facial nerve, which is colored yellow, by excavating the posterior part of the mastoid.

A. Goss.

Mouret, J.: The Surgical Anatomy of the Mastoid (L'anatomie chirurgicale de la mastoïde). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The author traces the limits of the surgical mastoid region, studying its structure and the anatomical relations that make surgical intervention in this region such a delicate procedure.

The surgical mastoid differs from the anatomical mastoid in that it comprises not only the mastoid process, but all the temporal region back of the external auditory meatus, the tympanum, and the semicircular canals. The author outlines an area on the temporal bone which he calls the mastoid region, and studies in detail its form and the anatomical relations of each surface as well as the internal structure.

The external surface, which is *par excellence* the operative region, is studied with special care from both descriptive and topographical points of view.

The relations of the deep parts of the mastoid region to the external surface are demonstrated by means of horizontal sections which enabled the author to establish very definitely the topography of this region and divide it into an antral zone, a subantral zone, an apical zone, an intersinuso-antral zone, a sinal zone and a cerebellar zone. The normal and abnormal locations of these zones and their relations to the character of the bone (cellular, spongy or compact) are studied.

The development of the antrum, its normal and abnormal locations, and trephining of the antrum are given a special chapter. The author describes a method which he calls trans-spina-meatal trephining. It has the advantage over the classic procedure in that it enters the antrum by the shortest and safest route, and reduces to a minimum the danger of injuring either the descending lateral sinus or the facial nerve.

Bryant, W. S.: Management of Mastoid Wounds.

Tr. Internat. Cong. Med., Lond., 1913, Aug.

By Surg., Gynec. & Obst.

The final results after a mastoid operation depend very largely on the management of the mastoid wound. What subsequently befalls this wound, whether it heals quickly with a minimum of scar, a minimum of distress to the patient, and a maximum increase of hearing, depends even more upon the technique of the post-operative care of the wound than upon the technique of the operation. The post-operative treatment must be adapted to meet one of two different events: first, nature's promising attempts to heal the wound must be encouraged; or second, if nature fails, the unsuccessful attempts at healing must be guided. In the first event, our aim is to interfere with the natural process as little as possible; having closed and united the surfaces of

the wound, our sole object is to prevent infection from without. In the second event, various contingencies require attention: (1) Collections of fluid (serum or blood) under pressure within the wound have to be released by a filiform drain or by probing. (2) Collections of pus must be evacuated by probing. (3) Necrosis must be controlled by moist antiseptic dressings and powders. (4) Redundant granulation tissue must be restrained. Granulations are best avoided by preventing infection in the wound. The easiest method of removing them is by curetting. (5) The formation of excessive scar tissue must be prevented by effecting a rapid healing. (6) Tympanic adhesions are also avoided by rapid healing; they are managed by early and repeated tympanic inflation. (7) The formation of permanent fistulæ should be prevented by the avoidance of packing and by the encouragement of cicatricial tissue. (8) In a general way, we have to hurry nature when her reparative process seems too slow. Indolent wounds are aroused by moist stimulating dressings and powders, and are aided by general tonic and specific medication when indicated.

With care and good judgment the result of a mastoid operation can be made eminently satisfactory. The convalescence is reduced to a few days, the scar and deformity become negligible, pain is obviated, and the hearing is improved.

Kramptitz: The Dangers of Ligating the Jugular Vein in Otology and the Possibility of Preventing Them (Gefahren der Jugularisunterbindung in der Ohrenheilkunde und die Möglichkeit ihrer Verhütung). *Internat. Zentralbl. f. Ohrenheilk. u. Rhino-Laryngol.*, 1913, xi, 161.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

In the year 1880 Zaufal ligated the internal jugular vein for sinus thrombosis of otogenous origin. Since that time the operation has been a recognized procedure for the prevention of otogenous pyæmia. Naturally the focus in the sinus must be opened. On account of numerous other collateral branches some operators will not ligate the jugular vein. According to Stenger no operations should be performed either on the sinus or the jugular vein in the presence of acute suppurative processes within the ear. In chronic cases, especially those complicated with cholesteatomata, ligation of the jugular may be performed in addition to cleaning out the diseased area.

Air embolism and the formation of a new thrombus at the site of ligation are unpleasant complications. Fatal congestion of the brain due to anomalies or hypoplasia of the other vessels may occur. More frequent are transient disturbances of circulation accompanied by headache, cyanosis, and œdema of the side involved. Injury to the vagus nerve has been observed. Ligation of both jugulars need not be fatal. All of the dangers have not brought the operation into discredit. To prevent

the formation of an infected thrombus at the site of ligation the peripheral end of the vein has been sutured to the skin wound. To prevent the formation of sudden œdema of the brain it must be determined whether the opposite jugular vein is patent. This is done most easily by compressing the vein temporarily. The communication between both jugulars is so extensive that one may be ligated without causing much disturbance in the circulation. With bilateral compression swelling of the supraorbital and retinal veins occurs. The same results are noted if one vein is thrombosed and the other is compressed or aplastic.

PAETZOLD.

Jacques, P.: Pharyngeal Drainage of Cranial Suppurations of Otogenous Origin (Sur le drainage pharyngien des suppurations crâniennes d'origine otique). *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.

By Surg., Gynec. & Obst.

Otogenous retro-pharyngeal abscess may have three origins: (1) Adenophlegmon (in 10 per cent of cases, according to the author); (2) the rupture of the floor of the tympanum or of a sublabrynthine cell (44 per cent); and (3) the migration of a nuchal abscess secondary to pachymeningitis (46 per cent).

The author explains the mechanism of this latter variety from two cases of his own with dissection and anatomical sections. The starting point is prolonged suppuration around the sinuses which finds its exit from the skull through the anterior condyloid foramen or even through the occipital bone perforated at its thinnest point back of the condyle.

Outside the skull the pus tends to infiltrate the cellular interstices of the neck, following the occipital artery and its accompanying nerves and veins. Its progress toward the pharynx is cut off by a resistant musculo-aponeurotic barrier extending transversely between the mastoid and the condyle, and vertically between the jugular process of the occipital and the lateral mass of the atlas. It is composed from without inward of the parotid aponeurosis, the styloid process and its muscles, and the rectus capitis lateralis and its aponeurosis which covers the vessel sheaths in front. A somewhat exceptional anatomical condition favors the transmission of the pus toward the pharynx. This is the presence of an intermediate condyloid foramen which transmits a venous channel through the aponeurosis of the rectus capitis lateralis, anastomosing at the external orifice of the anterior condyloid foramen with the plexus of the hypoglossal nerve.

The author believes that the discharge of the pus through the pharynx is favorable because it gives permanent sloping drainage to a collection which is imperfectly evacuated by the freest incision through the nape of the neck. He therefore proposes to favor this "fortunate complication" by cautiously scraping the aponeurotic attachment of the right capitis lateralis to the occipital condyle. A. Goss.

SURGERY OF THE NOSE, THROAT, AND MOUTH

Marschick, H.: Pathology and Diagnosis of Malignant Diseases of the Nose and Nasopharynx. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug.
By Surg., Gynec. & Obst.

Owing to the bad prognosis of malignant tumors of the nose and nasopharynx, many rhinologists have given up operating on these cases. These tumors are fatal because they are located near important organs and in a region of complicated structures. The clinical malignancy is often more important than that demonstrated pathologically. In this article tumors of the nose and accessory sinuses are treated in one group and those of the nasopharynx in another.

1. About 800 cases of malignancy of the nose and sinuses are cited from the literature. Theories of cause relate to chronic irritation, mechanical or chemical, or to changes in the cells without external influence. The relation of empyema or benign tumors (polypi especially) to malignancy is considered. Histologically, the sarcoma is most frequent. They arise usually from the periosteum or bone, with a predilection for the septum or anterior half of the middle turbinate. Carcinomas are most malignant. They originate from the epithelium, the glands, or paradental germinal cells.

Symptoms are often late, the onset usually coming with obstruction and regional pain. Hæmorrhage, eye or brain involvement, often follow. Metastases, except in the regional lymph glands, are rare. Death often results from cerebral complications or hæmorrhage before cachexia has become marked.

2. In the nasopharynx malignancy is less common. Carcinoma prevails and endothelioma is more frequent than in the nose. Lympho-sarcoma originating in the pharyngeal tonsil is not rare. Symptomatically there is a long latent period. At the onset there is cough, deafness, and involvement of the cranial nerves, especially the lower branch of the trifacial; then occipital pain and paralyses. Distant metastases are formed only occasionally. The ease with which hæmorrhage may be started makes the removal of a portion dangerous.

EARLE B. FOWLER.

Kocher and Horand: The Temporary Resection of the Superior Maxilla for Ossifying Chondroma of the Nasopharynx (Sur un cas de résection temporaire du maxillaire supérieur pour un chondrome ossifiant du naso-pharynx). *Lyon chir.*, 1913, x, 135.
By Journal de Chirurgie.

The authors report a case as an example of the usefulness of temporary resection of the superior maxillary as a means of approach to the upper pharynx. Their patient, aged 29, for some months

had had violent headache and signs of progressive bilateral nasal obstruction. On both sides there was symmetrical ophthalmia and paresis of the muscles of the eye, which was most marked in the internal rectus (external strabismus). Examination showed behind the velum a hard, rough tumor filling the pharynx. It did not bleed and did not yield to pressure.

Jaboulay first ligated the right external carotid, and then resected the superior maxillary and lifted it upward and outward. This resection gave very free access to the tumor, which was as large as the fist. The tumor was extirpated along with an orbital prolongation the size of a hazel-nut. The maxillary was then replaced and fixed by ligature of the incisors and the suture of the molar.

The tumor was made up of irregularly distributed layers of cartilage and osseous tissue separated by fibrous bands.

The patient recovered and the cosmetic result was good. The recovery was retarded for a long time, however, by an abundant suppuration which decreased only after the elimination of a large sequestrum involving the alveolar border and the vault of the palate. The right half of the vault of the palate was necrosed. Between the mouth and the nasal cavities and sinuses there was a large opening which caused a marked nasal tone.

CH. LENORMANT.

Iglauer, S.: Some Attempts at the Intranasal Transplantation of Nasal Tissues. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 308.

By Surg., Gynec. & Obst.

After a limited series of experiments on animals, the author finds that though there are no technical difficulties in the transfer of intranasal tissue from one individual to another of the same species, the surface transplantation will probably fail on account of infection. The submucous transplantation yields better results.

From his clinical experiments he finds that while surface transplantation is not very successful, the submucous transplantation of nasal mucous membrane and underlying bone can be carried out with good prospects for the survival of the transplant, but that the latter tends to become absorbed.

ELEN J. PATTERSON.

Beck, J. C.: Removal of Adenoids by Direct Inspection. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 273.

By Surg., Gynec. & Obst.

The author claims that by his method of retracting the soft palate, adenoids can be removed by direct inspection under ether anæsthesia more thoroughly

especially around the Eustachian orifice. At the same time the primary tonsillar hæmorrhage can be controlled.

The technique of the operation is as follows: One of the free ends of a small rubber catheter is passed through each nostril and withdrawn through the mouth. After the tonsils are removed, the catheter is drawn taut, one end over each cheek. This brings the pillars into apposition, controls the tonsillar hæmorrhage, and exposes the nasopharynx. With the head extended and the pharyngeal reflex abolished, the adenoid mass can be seen and removed by direct inspection by the method approved by the operator.

ELLEN J. PATTERSON.

Goodale, J. L.: Indications for and the Relative Value of Tonsillotomy and Tonsillectomy.

Tr. Internat. Cong. Med., Lond., 1913, Aug.

By Surg., Gynec. & Obst.

It has not been demonstrated that complete removal of the tonsils is followed by a harmful effect upon the general system.

Tonsillotomy involves usually less trauma than does tonsillectomy, but in the latter the method of removal is of primary importance. A sharp dissection down to the tonsillar artery, with snaring of the vessels, gives the least amount of inflammatory reaction.

Of the two operations, tonsillectomy shows a larger percentage of septic complications, because of the greater trauma it usually occasions, and also the relatively larger number of septic conditions under which of late years an operation is undertaken.

The relative frequency of post-operative hæmorrhage is not definitely established, but in view of the available methods of treatment, it is no longer a serious complication if dependent upon local causes.

While gross deformities of the parts involved are not likely to follow tonsillotomy, cicatricial occlusion of the lacunar orifices is frequent, and may lead to an intensification of the original chronic inflammation. Tonsillectomy in unskilled hands may be followed by marked and injurious distortion, but with good technique should have no other alteration than an approximation, and occasionally, a partial fusion, of the pillars.

The indications for operation should be such pathological changes of the tonsils as are actually a detriment to the individual.

Simple hyperplasia, if obstructive or favoring catarrhal conditions, and if persistent, may be sufficiently treated by a tonsillotomy, especially in children.

The systemic ill effects of chronic tonsillitis may be increased by a tonsillotomy. In such cases, complete removal is preferable to a partial removal, although mild cases of chronic inflammation may be sufficiently relieved by appropriate treatment without excision.

Infection of the fauces due to micro-organisms may not be prevented by removal of the tonsils.

Recurrent local infections or general infections

having their origin in the tonsils require tonsillectomy as soon as a favorable moment for operating arrives. Tonsillotomy may be expected here to prove inadequate.

Recurrent acute catarrhal infections of the throat require complete removal of the tonsils if these show chronic inflammation, although immunity against subsequent attacks is not necessarily secured.

Local tuberculosis of the tonsil requires complete removal of the organ.

In young children with adenoid enlargement requiring removal, the tonsils should not be excised unless they cause demonstrable injury or favor attacks of acute middle-ear inflammation.

If an impairment of the speaking voice is dependent upon tonsillar disturbances, these may be corrected according to the principles already given, and if a tonsillectomy is indicated, it may be performed with proper technique without anxiety.

In singers, slight alteration in the tension of the palatal muscles may influence the voice either favorably or unfavorably. In the case of beginners with harmful alterations of the tonsils, a partial or complete removal may usually be effected if the local or general welfare of the patient demands it. With increasing length of singing experience a correspondingly conservative attitude should be maintained, particularly in respect to truly fine voices.

De Santi, P. R. W.: The Pathology of the Various Acute Inflammations of the Throat and Neck Including Acute Œdema, Phlegmon, Erysipelas, and Angina Ludovici, but Excluding Diphtheria.

Tr. Internat. Cong. Med., Lond., 1913, Aug.

By Surg., Gynec. & Obst.

This paper was a report of eight cases of acute septic inflammations of the throat in which bacteriological examinations were made. The cases were as follows: (1) erysipelas of the pharynx; (2) acute septic inflammation of the tonsils and pharynx; (3) acute gangrenous inflammation of the throat; (4) acute pharyngitis due to streptococcus pyogenes followed by septicæmia, deep glandular inflammation, and pericarditis; (5) acute suppurative inflammation of the larynx; (6) acute œdematous septic laryngitis; (7) acute septic inflammation of the tonsils and pharynx; and (8) acute septic inflammation of the pharynx, tonsils, and buccal mucous membrane with inflammation of the submaxillary cellular tissue.

All of the patients except one were adults in the prime of life. The one exception was a boy 12 years of age. All of the patients were males and previously had been in excellent health. Five of them were hospital patients, and three, private patients. In all, the streptococcus predominated in the cover-glass preparations and cultures. Six of the cases were treated with some form of antistreptococcus serum; one case had an autogenous vaccine in addition. In one case the subsequent history is unknown as the patient refused to enter the hospital. In

another case serum and vaccine treatment were refused, but the patient recovered. In three cases the prognosis was very unfavorable (Nos. 3, 4, and 8). All of the six cases treated made excellent recoveries as did also the patient who refused serum treatment.

The history, clinical symptoms, the course of the disease, and more particularly, the bacteriological examination of this series of cases indicate their pathological identity and point to the conclusion that each one should be considered as showing merely a different degree of virulence of one and the same pathological process. The micro-organisms that are the chief causative factor belong to the streptococcus pyogenes group. Other organisms, however, may be, and are, found; not infrequently more than one organism is present. There is, however, no one specific organism for every one of these various inflammations. The different localization of these septic inflammations depends upon the resisting powers of the parts attacked. An accidental breach of the surface or a pre-existing condition of catarrh renders a part more susceptible to infection.

The prognosis of such cases is always very grave. The sooner this fact is recognized by the general practitioner, the better. Heart failure is the great danger and it is by no means uncommon for a fatal issue to result in twenty-four or forty-eight hours from the outset of the malady. Ludwig's angina should be included in this class of cases and is particularly dangerous to life. In addition to the usual methods of treatment, citric acid in 60 gr. doses may be prescribed to lower the coagulability of the blood so that the lymph that contains large amounts of antibacterial and antitryptic bodies may be freely admitted to the infected parts and the organisms thereby destroyed before the formation of pus.

The main points in the treatment of these inflammations are early recognition, a skilled bacteriological examination, including examination of the blood, and isolation if possible of the offending micro-organism, and serum or vaccine treatment.

A serum should be given as early as possible. It should, moreover, be of a type that most nearly

approaches the autogenous variety. Following the use of a serum or in combination with it an autogenous vaccine should be given as soon as prepared.

The author attributes the recovery of all of his cases to treatment along these lines.

Botey, R.: The Best Method for Extirpating the Larynx (Quelle est la meilleure méthode d'extirpation du larynx?) *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. By Surg., Gynec. & Obst.

Botey discusses the various methods of laryngectomy and points out the advantages and disadvantages of each. The method of preference is Gluck's method. Gluck makes two lateral flaps which give a good view of the field of operation. He then cuts all vessels between two ligatures and extirpates the larynx from above downward, suturing the wound completely before separating the vocal organ from the trachea. This effectually prevents the entrance of septic liquids into the trachea. The glands are removed if they are at all diseased. The trachea is not separated from the œsophagus so there is no necrosis of the rings or gangrene of the posterior wall. This method has been more successful than any other in avoiding broncho-pneumonia and mediastinitis. Gluck reports 63 cases in which there was no death from operation. The operation without removal of the glands requires an hour; with removal of the glands, two hours. For patients who cannot stand so long an operation, Le Bec's method in two stages separated by an interval of three weeks is to be preferred. General anæsthesia is better than local except for very stoic patients. Botey uses Schleich's mixture, chloroform, ether and ethyl chloride, given with an apparatus that mixes oxygen with them automatically.

Special care should be taken in regard to asepsis, and the operation should be performed with all possible speed. The patient should be unusually well nourished before the operation. These precautions, with heat and heart tonics, will prevent surgical shock.

Intelligent and well-trained patients will learn to speak with their pharyngeal voice, and Botey has constructed an apparatus to aid them. A. Goss.

BIBLIOGRAPHY OF CURRENT LITERATURE

GENERAL SURGERY

SURGICAL TECHNIQUE

NOTE.—The bold face figures in brackets at the right of a reference indicate the page of this issue on which an abstract of the article referred to may be found.

Operative Surgery and Technique

Prophylaxis of embolus in paraffin injection. HARTUNG. Deutsche med. Wchnschr., 1913, xxxix, No. 32.

The question of early leaving of the sick-bed after abdominal operations. KOHLSCHÜTTER. München. med. Wchnschr., 1913, lx, 1378.

The treatment of unclean wounds. F. E. NEEF. Am. J. Surg., 1913, xxvii, 313.

The treatment of granulating wounds. A. WITEK. München. med. Wchnschr., 1913, lx, 1656.

Aseptic and Antiseptic Surgery

A simple means of protecting the hands in purulent operations. A. BRÜNING. München. med. Wchnschr., 1913, lx, 1716.

Disinfection of the skin with chlorated alcohol. PEL-LEGRINI. Rev. osp., Roma, 1913, iii, No. 14.

Disinfection by alcohol. NEDZIELNITZKY. Charkov. med. J., 1913, xvi, No. 1.

Disinfection of the field of operation with thymol alcohol. KOEHLER. Deutsche mil.-ärzt. Ztschr., 1913, xlii, No. 16.

Disinfection of the skin of the operative field and of the hands by means of alcohol and iodine. ANIKÉIEFF. J. akush. i jensk. boliez., St. Petersb., 1913, xxviii, Nos. 7-8.

Experimental chemotherapy and the problem of internal disinfection in bacterial infections. J. MORGENROTH. Naturwissenschaften, 1913, i, 609.

Rubber gloves or protective antiseptic applications. DUBARD. Bourgogne méd., 1913, xxi, No. 7.

Alcohol operating gloves. B. KOZLOWKI. Zentralbl. f. Chir., 1913, xl, 1038. [597]

Anæsthetics

Theory of narcosis. J. TRAUBE. Arch. f. d. ges. Physiol., 1913, cliii, 276.

Anæsthesia among the Indians. J. M. G. LUKAYS. Mass. M. J., 1913, 302.

Dosimetric method of administering chloroform. D. W. BUXTON. Tr. Internat. Cong. Med., Lond., 1913, Aug. [597]

Narcosis with heated ether. JULLIARD. Rev. med. Suisse romande, 1913, xxxiii, No. 8.

Three cases of generalized narcosis produced by intramuscular injection of ether. J. A. GAMOLKO. Chirurgia, St. Petersb., 1913, xxxiv, 51.

General anæsthesia by intramuscular injection of ether. M. DESCARPENTRIES. Tr. Internat. Cong. Med., Lond., 1913, Aug. [598]

Oil-ether; an attempt to abolish inhalation anæsthetics. J. T. GWATHMEY. Tr. Internat. Cong. Med., Lond., 1913, Aug. [599]

Prolonged general anæsthesia with ethyl chloride. E. GAULLAUD. Tr. Internat. Cong. Med., Lond., 1913, Aug. [599]

Mixed anæsthesia. ROSSIISKY. Vrach. Gaz., 1913, vi, No. 22.

The danger of the combination of morphine with generalized narcosis and with soporifics. W. STRAUB. München. med. Wchnschr., 1913, lx, 1823.

Nitrous-oxide oxygen analgesia. M. SALZAR. Lancet-Clin., 1913, cx, 114.

The employment of local anæsthesia in surgical practice. A. OBERST. Ztschr. f. ärztl. Fortbild., 1913, x, 513.

Animal experiments on the toxicology of alypin. SCHRÖDER. Deutsche med. Wchnschr., 1913, xxxix, 1459.

Local anæsthesia in oto-rhino-laryngology. W. UFFENORDE. Ztschr. f. Ohrenh., 1913, lxviii, 293.

A modification of mandibular anæsthesia. H. TÜRKHEIM. Deutsche Monatschr. f. Zahnh., 1913, xxxi, 423.

Conduction anæsthesia of the lower jaw. P. GADD. Odontologie, 1913, xlix, 447.

Sacral anæsthesia. SCHLIMPERT. Deutsche Gesellschaft. f. Gynäk., Halle, 1913, May. [600]

New methods in spinal analgesia. T. TUFFIER. Tr. Internat. Cong. Med., Lond., 1913, Aug. [600]

General analgesia by cocaine anæsthesia of the lumbosacral route. LE FILLIATRE. Tr. Internat. Cong. Med., Lond., 1913, Aug. [600]

Paralysis of the phrenic nerve after plexus anæsthesia. F. BRUNNER. Zentralbl. f. Chir., 1913, xl, 1104. [600]

Anæsthesia with ethyl chloride given in small doses on compresses. VANVERTS. L'echo med. du Nord, Lille, 1913, xvii, No. 33.

"Narcosia," a new hamamelis local anæsthetic. GEMBICKI. Deutsche zahnärztl. Wchnschr., 1913, xvi, 521. [601]

Hedonal narcosis. J. P. LASTOTSCHKIN. Chirurgia, St. Petersb., 1913, xxxiv, 1.

A table for employment in intravenous hedonal narcosis. A. M. NIKOLSKI. Chirurgia, St. Petersb., 1913, xxxiv, 30.

Strengthening the effect of ordinary narcotics by the use of bromide salts. M. H. FLAMMER. Ztschr. f. d. ges. exp. Med., 1913, i, 575.

The benefits of double anæsthesia. JOHN W. SEYBOLD. Denver Med. Times, 1913, xxxiii, 44.

The value of anoci-association. J. H. CHALDECOTT and C. W. S. BRYAN. Lancet, Lond., 1913, clxxxv, 721.

Surgical Instruments and Apparatus

An apparatus (anæsthetometer) for measuring and mixing anæsthetics and other vapors and gases. KARL CONNELL. Surg., Gynec. & Obst., 1913, xvii, 245. [601]

An apparatus for producing narcosis by hyperpressure; a new critical discussion and a communication concerning a

new simplified apparatus. W. GERLACH. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 205.

A new tongue and cheek holder. A. GUTTMANN. *Deutsche zahnärztl. Wchnschr.*, 1913, xvi, 617.

An improved audiometer. H. HAYS. *Laryngoscope*, 1913, xxiii, 864.

An endoscopic syringe. CHEVALIER JACKSON. *Laryngoscope*, 1913, xxiii, 863.

A coin-catcher for removing coins from the oesophagus. J. R. GILBERT. *J. Am. M. Ass.*, 1913, lxi, 491.

The respirator; an appliance for resuscitation by producing enforced respiration; report of 163 experiments. H. E. TOMPKINS. *N. Y. M. J.*, 1913, xcvi, 369.

Description of an abdominal, lumbo-ilio-sacral support and its uses, advantages and limitations. H. W. MARSHALL. *Boston M. & S. J.*, 1913, clxix, 275.

New instruments for the duodenum and the small intestine. MAX EINHORN. *Berl. klin. Wchnschr.*, 1913, l, 1344.

Stomach clamps. HERTLE. *Zentralbl. f. Chir.*, 1913, xl, No. 33.

An apparatus with pneumatically closed opening for use in colostomy. JOSEF WINKLER. *Wien. klin. Wchnschr.*, 1913, xxvi, 1365.

Use of electric compresses for heat in gynecology and abdominal surgery. RISS. *Marseille méd.*, 1913, l, No. 16.

Apparatus for transportation of patients with injuries of the legs. WEISSENSTEIN. *Mil.-ärzt.*, 1913, xlvii, 205.

The employment of spreading springs in the treatment of purulent processes. MAX TIEGEL. *Zentralbl. f. Chir.*, 1913, xl, 1137.

A new operating table. M. BORCHARDT. *Berl. klin. Wchnschr.*, 1913, l, 1441.

A pus receptacle with handle. MAX TIEGEL. *München. med. Wchnschr.*, 1913, lx, 1941.

An instrument for adjusting the clamps of v. Herff. LANGE. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 34.

Care of surgical instruments. DUBREUIL. *J. de med. de Bordeaux*, 1913, lxxxiv, No. 33.

SURGERY OF THE HEAD AND NECK

Head

Congenital bilateral fistulae of the lower lip. MILLER KAHN. *Am. J. M. Sc.*, 1913, cxlvi, 223. [601]

Primary sarcoma of the lower lip. A. J. MARKLEY. *J. Am. M. Ass.*, 1913, lxi, 334.

Parotitis following operative interventions in the abdominal cavity, especially upon the female genitalia. VERNER VON HERZER. *Finska läk.-sällsk. handl.*, Helsingfors, 1913, lv, 52.

Primary and isolated actinomycosis of the salivary glands. GUSTAF SÖDERLUND. *Deutsche med. Wchnschr.*, 1913, xxxix, 1632.

Cysts of the maxillary sinus. COLLET. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx*, Par., 1913, xxxix, No. 7.

Dental empyema of the maxillary sinus. PAUL ROSENSTEIN. *Deutsche Monatschr. f. Zahnh.*, 1913, xxxi, 406.

Accidents in lavages of the maxillary sinus. RÉTHI. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, vi, 519.

The literature of cysts of the maxillary bones. GERBER. *Beitr. z. Anat., Physiol., Path. u. Therap. d. Ohrens, d. Nase, u. d. Halses*, 1913, vi, Nos. 4-6.

Osteoplastic repair of congenital and acquired defects of the lower maxillary bone. RUDOLF GÖBELL. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 144.

A case of temporary resection of the superior maxillary bone for an ossifying chondroma of the nasopharynx. KOCHER and HORAND. *Lyon chir.*, 1913, x, No. 2.

The treatment of fractures of the mandible. F. COLEMAN. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [602]

Suppuration of the frontal sinuses. VON LÄNG. *Beitr. z. klin. Chir.*, 1913, lxxxiv, 226. [604]

Celluloid plate used 16 years ago to replace defect in frontal bone. H. SCHLOFFER. *Prag. med. Wchnschr.*, 1913, xxxviii, 383.

On the treatment of fractures of the petrous portion of the temporal bone. H. NIMIER and A. NIMIER. *Rev. de chir.*, 1913, xlviii, 22. [604]

Operative treatment of wounds of the skull with blunt instruments. R. BRADE. *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, 641.

Findings in obscure head lesions. W. F. MANGES. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [604]

Fractures of the skull. E. KILBOURNE TULLIDGE. *Hosp. Bull. Univ. Md.*, 1913, ix, 107.

Prognosis and treatment of compound fracture of the base of the skull. A. C. BURNHAM. *Boston M. & S. J.*, 1913, clxix, 270.

Operative treatment of fibromata of the base of the skull. KRASSINE. *Chirurgia, St. Petersburg*, 1913, xxxiii, No. 193.

Cystic fibrous otitis of the skull. FRANGENHEIM. *Zentralbl. f. Chir.*, 1913, xxxiv, 1345.

A case of hydrocephalus. J. SPEESE. *Arch. Pediatrics*, 1913, xxx, 600.

Traumatic epilepsy. MARCHAND. *Rev. de l. Hosp.*, 1913, vi, No. 6.

Traumatic epilepsy, and its surgical treatment. MATTHIAE. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, Nos. 5-6.

The question of surgical treatment of cortical, traumatic or non-traumatic, epilepsy. W. J. RASUMOWSKY. *Arch. f. klin. Chir.*, 1913, ci, 1075. [605]

The operative treatment of traumatic epilepsy. KOLACZEK. *Deutsche Ztschr. f. Nervenhe.*, 1913, lxvii-lxviii, Festschr. f. v. Strümpell, 312.

The operative treatment of epilepsy. RAUCH. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

Surgical treatment of epilepsy. FRACASSI. *Rev. med. d. Rosario*, 1913, iii, No. 3.

Experiments on the cerebral cortex with relation to the production of cortical epilepsy (a) after the administration of hypnotics, (b) after the administration of bromides. G. BIKELES and L. ZBYSEWSKI. *Neurol. Zentralbl.*, 1913, xxxii, 1081.

The individual differences in the extent of the motor area of the cortex. JEANNOT ISRAELSOHN. *Arb. a. d. neurol. Inst. a. d. Wien. Univ.*, 1913, xx, 155.

Sarcomas of the cranial dura mater. DAMBRIN and NANTA. *Arch. med. de Toulouse*, 1913, xx, No. 14.

Hæmangioma of the meninges in vascular nævus of the face. OTTO HEBOLD. *Arch. f. Psychiatr. u. Nervenkrankh.*, 1913, li, 445.

Epidemic meningitis and meningo-bacterin. S. H. WADHAM. *Mil.-Surg.*, 1913, xxxiii, 130.

A case of occipital meningocele. NEGRI. *Clin. chir.*, Milano, 1913, xxi, No. 7.

Autoplastic fat transplantation for defects of the dura and the brain. E. REHN. Arch. f. klin. Chir., 1913, ci, 962. [605]

Disturbances of the gustatory sensation in lesions of the internal capsule and the optic thalamus. PAUL SCHILDER. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. f. v. Strümpell, 472.

Traumatic intracranial effusions, both intra- and extradural. ROCHET and CHARBONNEL. Prov. med., Par., 1913, xxvi, No. 31.

A human being without a cerebrum. T. HOUGH. Va. M. Semi-Month., 1913, xviii, 239.

A human being without a cerebrum. L. EDINGER and B. FISCHER. Arch. f. d. ges. Physiol., 1913, clii, 535.

Air in the ventricles of the brain following a fracture of the skull; report of a case. W. H. LUCKETT. Surg., Gynec. & Obst., 1913, xvii, 237. [605]

Several instructive false diagnoses in cerebral tumors. EDUARD MÜLLER. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. f. v. Strümpell, 388.

Increased pressure of the cerebro-spinal fluid in brain tumors. ANDRÉ THOMAS. Clinique, Par., 1913, viii, 514.

The treatment of tumors of the brain and the indications for operation. BRUNS. Tr. Internat. Cong. Med., Lond., 1913, Aug. [606]

Types of paralysis and functional cerebral foci. JOSEPH REICH. Deutsche Ztschr. f. Nervenhe., 1913, xli, 446.

Diagnosis and surgical treatment of diseases of the brain. BYCHOWSKI. Medycyna i Kron. lek., Warszawa, 1913, xlviii, Nos. 33-34.

Aneurisms of the cerebral arteries and their consequences. REINHARDT. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 3.

A case of polypus in the vermiform process. P. SSITKOWSKY. Med. Obsr., St. Petersburg, 1913, lxxx, 74.

The clinical value of palpation of the vermiform process. M. RJESAKOFF. Med. Obsr., St. Petersburg, 1913, lxxx, 61.

Surgery of tumors of the ponto-cerebellar angle. MARX. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 1.

Median compression of the cerebellum. GREGGIO. Clin. chir., Milano, 1913, xxi, No. 7.

Acromegaly. ADOLF REINHARDT, CREUTZFELDT and HANS GERHARD. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvi, 465.

Acromegaly. A. LERI. Handb. d. Neurol., 1913, iv, 283. [606]

Experimental researches on the physiology of the hypophysis. HANS SCHLIMPERT. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxviii, 8.

Comparative anatomy and histology of the hypophysis cerebri. W. STENDELL. Arch. f. microscop. Anat., 1913, lxxxii, 289. [607]

Study of lesions of the hypophysis. RONCHETTI. Gior. d. r. Accad. di med. di Torino, 1913, lxxvi, Nos. 3-4.

Pharmacological investigations of the active principles of the hypophysis. H. FÜHNER. Ztschr. f. d. ges. exp. Med., 1913, i, 397. [607]

Paths of discharge from the hypophysis. HANS WASSING. Wien. klin. Wchnschr., 1913, xxvi, 1270.

The provenience of the blood-pressure increasing substance in the hypophysis. G. SCHICKELE. Ztschr. f. d. ges. exp. Med., 1913, i, 545.

Experimental compression of the hypophysis. A. AUSTONI. Policlin., Roma, sez. chir., 1913, xx, 159. [607]

Hypophyseal adiposity (Basophile adenoma of the hypophysis). THEODOR BAUER and HANS WASSING. Wien. klin. Wchnschr., 1913, xxvi, 1236.

The relation of the sexual glands to the hypophysis. BARNABO. Policlin., Roma, sez. chir., 1913, xx, No. 8.

A new method of operation on the hypophysis. PREY-

SING. Internat. Zentralbl. f. Laryngol., Rhinol. u. verw. Wiss., 1913, xxix, 401. [607]

Operations on the hypophysis by the nasal route. G. HOLMGREN. Hygiea, 1913, lxxv, 481. [608]

A method of fixation of the hypophysis and its adnexa in the fresh state. ERWIN THOMAS. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. f. v. Strümpell, 772.

Radiology of the pituitary body in epilepsy and pituitary disorders. G. C. JOHNSON. Tr. Am. Röntg. Ray Soc., Boston, 1913, Oct. [608]

Clinical studies in pituitary irritation with report of a case. L. J. GENELLA. New Orleans M. & S. J., 1913, lxvi, 93.

Ocular manifestations of disease of the pituitary body. G. M. WALDECK. J. Mich. St. Med. Soc., 1913, xii, 417.

Neck

The avoidance of unsightly scar deformities in the operative treatment of cervical lymphadenitis. JAS. H. NICOLL. Glasgow M. J., 1913, lxxx, 81. [608]

Primary fusio-cellular sarcoma localized in the cervical lymphatic glands. PARREIRA. Med. contemp., Lisbon, 1913, xxxi, No. 33.

The excision of the groups of cervical lymph glands in cancers of the mouth and of the pharynx. M. H. MORESTIN. J. de chir., 1913, x, 657. [609]

Tumors of the carotid body with report of two cases. A. GRAHAM. Cleveland M. J., 1913, xii, 537. [615]

False branchiomas. MASSON. Presse méd., Par., 1913, xxi, No. 65.

The treatment of oedema fugax (Quincke). K. ALBRACHT. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. f. v. Strümpell, 833.

Contribution to the surgery of the neck. Is unilateral resection of the internal jugular and pneumogastric harmless? P. GUIBAL. Rev. de chir., 1913, xlviii, 96. [615]

Thyroid. W. EDMUNDS. J. Pathol. & Bacteriol., 1913, xviii, No. 1. [616]

Pathological changes of the thyroid gland in syphilis. E. W. BUSCH. Dissertation, St. Petersburg, 1913. [616]

The influence of the normal and the pathologically changed thyroid gland upon the nervous system according to experimental investigations. WALTER. Allg. Ztschr. f. Psychiat., 1913, lxx, 849.

Acute thyroiditis as a complication of acute tonsillitis. CLEMENT F. THEISEN. Albany Med. Ann., 1913, xxxiv, 445.

Metastatic adenoma of the thyroid, simulating a tumor of the spinal cord with compression myelitis, and a method of removing bone marrow from deep-lying bones for diagnostic purposes. H. C. JACOBÆUS. Deutsche Ztschr. f. Nervenhe., 1913, xlix, 74.

An embryonic teratoma of the thyroid region. EHLERS. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvii, No. 1.

Effect of thyroidectomy on thyroid affections. A. KRECKE. Deutsche Ztschr. f. Nervenhe., 1913, xlvii-xlviii, Festschr. f. v. Strümpell, 337. [616]

The therapy of hyperthyroidism. H. A. H. BOUMAN. J.-Lancet, 1913, xxxiii, 425.

Surgical treatment of hyperthyroidism. CHARLES NOOTNAGEL. J.-Lancet, 1913, xxxiii, 423.

Goiter. H. H. HELBING. Eclec. M. J., 1913, lxxiii, 390.

Goiter from the standpoint of the specialist. M. B. TINKER. Laryngoscope, 1913, xxiii, 854.

The clinical and pathological relationships of hyperplastic and non-hyperplastic goiter. H. S. PLUMMER. J. Am. M. Ass., 1913, lxi, 650.

Studies on endemic goiter. DIETERLE, HIRSCHFELD and KLINGER. München. med. Wchnschr., 1913, lx, No. 33.

Notes on the pathology of simple and exophthalmic goiter. L. B. WILSON. *Med. Rec.*, 1913, lxxxiv, 373. [617]
 Treatment of exophthalmic goiter by radiotherapy. BELOT. *Arch. d'electr. med., exp. et clin.*, 1913, xxi, No. 364.

The structure of congenital struma. N. KRASNOGORSKI. *Virchows Arch. f. path. Anat., etc.*, 1913, cxxiii, 152.

Further material toward a theory of struma and Basedow's disease. WELJAMINOFF. *Russk. Vrach.*, 1913, xii, 349.

Diagnostic and therapeutic notes on Basedow's disease. Based on observations of 100 cases. JULIUS HALLERVORDEN. *Therap. d. Gegenw.*, 1913, liv, 295.

Lesions of the thyroid in Basedow's disease. G. ROUSSY and J. CLUNET. *Rev. Neurol.*, 1913, xxi, 1. [617]

Psychoses in Basedow's disease. ERNST COLLA. *Allg. Ztschr. f. Psychiatr. u. psych.-gerichtl. Med.*, 1913, lxx, 525.

Thirty cases of incomplete Basedow's disease or vasomotor neurosis. L. ALQUIER. *Rev. Neurol.*, 1913, xxi, 795.

Treatment of Basedow's disease. O. GÜNZEL. *Klin. therap. Wchnschr.*, 1913, xx, 995.

Myxoedema. HANS EPPINGER. *Handb. d. Neurol., Spez. Neurol.*, 1913, iv.

Parathyroidin treatment of spasmophilia. OSWALD MEYER. *Therap. d. Gegenw.*, 1913, liv, 354.

SURGERY OF THE CHEST

Chest Wall and Breast

Carcinoma and tuberculosis of the same breast. EDUARD BUNDSCHUH. *Beitr. z. path. anat. u. z. allg. Path.*, 1913, lvii, 65.

The treatment of recurrence and metastases from carcinoma of the breast. G. E. PFAHLER. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [618]

Suddenly developed bilateral cancer of the breast. MARQUIS. *Gaz. d. Hôp., Par.*, 1913, lxxxvi, No. 91.

Excessive epidermoid development of the cellular elements of a cancer of the breast. PIERRE NADAL. *Bull. et mém. Soc. anat. de Par.*, 1913, lxxxviii, 352.

Retrograde carcinomatous invasion into a lymph gland in a case of cancer of the breast. PIERRE NADAL. *Bull. et mém. Soc. anat. de Par.*, 1913, lxxxviii, 353.

A case of fibro-adenoma of the breast. MIKOULINA-IVANOVA. *Vrach. Gaz.*, 1913, vi, No. 31.

The necessity for operation in all tumors of the breast. H. A. MOFFAT. *S. African M. Rec.*, 1913, xi, 330.

The cystic disease of the mammary gland associated with a cholesteroline cyst. PIERRE NADAL. *Bull. et mém. Soc. anat. de Par.*, 1913, lxxxviii, 355.

A simplified method of treating purulent mastitis by negative suction. W. M. WOLKOWITSCH. *Russk. Vrach.*, St. Petersburg, 1913, xii, 1002.

Penetrating injuries of chest and abdomen. GULEKE. *Arch. f. klin. Chir.*, 1913, ci, 1030. [618]

The treatment of fractures of the clavicle. N. KAEFER. *München. med. Wchnschr.*, 1913, lx, 1599. [618]

Scaphoid scapula. DRÄSEKE. *Ztschr. f. d. Erforsch. u. Behandl. d. jugendl. Schwachsinn.*, 1913, vi, 468. [619]

The scaphoid form of the scapula. BRUCKNER. *Jahrb. f. Kinderheilk.*, 1913, lxxviii, 291.

1. Total extirpation of the scapula for sarcoma. 2. Plastic operation for sarcoma of the knee. HORAK. *Čas. lek. česk.*, 1913, lii, 1038.

Repair of large defects of the diaphragm, the thoracic wall and the pericardium by transplantation of flaps of fascia. ANSCHEN. *Zentralbl. d. Chir.*, 1913, xl, No. 22.

Collapse of the lung in treatment of tuberculosis. SPENGLER. *Cor.-Bl. f. Schweiz. Ärzte*, 1913, xliii, 1025.

Pulmonary tuberculosis and surgery. GORSE and DUPICH. *Rev. de chir., Par.*, 1913, xxxiii, No. 8.

Operative treatment of hæmoptysis caused by the disossification of the thoracic wall, which produced compression of the lung (thoracoplastic pleuro-pneumolysis). LISCHKIEWITSCH. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Therapeutic pneumothorax. S. DAUS. *Ztschr. f. Tuberkul.*, 1913, xx, 383.

Artificial pneumothorax, used in the fourth month of

pregnancy. D. O. KUTHY and G. LOBMAYER. *Beitr. z. klin. d. Tuberkul.*, 1913, xxvii, 285.

A case of artificial pneumothorax in the treatment of pleurisy with effusion. R. M. ALEXANDER. *N. Y. M. J.*, 1913, xcvi, 426.

Interlobar pulsating empyema. E. LEVI. *Wien. klin. Wchnschr.*, 1913, xxvi, 1276.

Experimental researches on the significance of mediastinal rigidity ("Mediastinalstarre") and its artificial production. MENZEL. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Chronic mediastinitis; its cause and treatment. C. LIAN. *Med. Press & Circ.*, 1913, xcvi, 143.

Syphilis of the mediastinum. N. FUSCHEFF. *Vrach. Gaz.*, St. Petersburg, 1913, xx, 987.

Malignant tumor of the mediastinum in an infant thirteen months old. KALLE and SALIN. *Arch. de méd. d. enfants, Par.*, 1913, xvi, No. 8.

A case of arrested development of the thymo-pharyngeal canals. KOURLOFF. *Vrach. Gaz.*, 1913, vi, No. 29.

The thymus gland. KARL BAASCH. *Deutsche med. Wchnschr.*, 1913, xxxix, 1455.

The physiology and pathology of the thymus gland. The significance of hyperplasia of its medullary tissues. GARHARD MEINHOLD. *Deutsche med. Wchnschr.*, 1913, xxxix, 1628.

A contribution to the symptomatology and therapy of thymus hypertrophy. BOISSONNAS. *Ztschr. f. Kinderheilk.*, 1913, vii, 472. [619]

Hypertrophy of the thymus in an infant two and one half years old. SOUTY. *Ann. d. mal. de l'oreille, du larynx, du nez et du pharynx, Par.*, 1913, xxxix, No. 7.

Trachea and Lungs

Report of one hundred tracheotomies. BERWALD. *Klin.-therap. Wchnschr.*, 1913, xx, 989.

The procedure in difficult removal of tracheotomy tube. BRÜGGEMANN. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, vi, 502.

Tracheo-bronchoscopy and laryngoscopy with head suspended. ZIMNE. *Vrach. Gaz.*, 1913, vi, No. 28.

Bronchoscopic removal of a collar button after twenty-six years' sojourn in the lung. C. JACKSON. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 360.

A new position for bronchoscopy and œsophagoscopy and its advantages over the classic position. J. MOURET. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [619]

History of a broncholith, bronchial calculus or lung stone. WALTER F. CHAPPELL. *Med. Rec.*, 1913, lxxiv, 294.

Tuberculosis of the tracheobronchial glands and its surgical treatment. BETKE. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

Bronchiogenic carcinoma. H. E. LORENZ. *Beitr. z. klin. Chir.*, 1913, lxxxv, 599. [620]

"Cylindroma" of the upper respiratory passages. WILLY PFEIFFER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, 156.

The spontaneous healing of pulmonary wounds. MAX TIEGEL. *Arch. f. klin. Chir.*, 1913, ci, 921.

Foreign bodies in the lungs; a report of two cases. H. R. M. LANDIS. *Penn. M. J.*, 1913, xvi, 870.

Two cases of rupture of the lung without fracture of the rib. WIDERÖE. *Norsk. Mag. f. Lägevidensk.*, Christiania, 1913, lxxiv, No. 9.

A case of saccharomycete infection of the lungs. W. WOVSCHEIN. *Med. Rec.*, 1913, lxxxiv, 388.

Artificial respiration. GÖRAN LILJESTRAND. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 470.

Pituitrin in operative and spontaneous hæmorrhage of the respiratory passages. S. CITELLI. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [620]

Heart and Vascular System

Injuries to the heart. LEOTTA. *Policlin.*, Roma, sez. chir., 1913, xx, No. 8.

Diagnosis of injuries of the heart. HÄCKER. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

A case of prolonged cessation of heart action resulting from a needle injury to the heart. LEPORSKY. *Russk. Vrach.*, 1913, xii, 118. [620]

Needle in the heart fifteen months; death; autopsy. W. P. NORTHRUP. *Am. J. Dis. Children*, 1913, vi, 87.

Two operations for wounds of the heart; one death; one recovery. CERNÉ. *Normandie med.*, 1913, xxix, No. 15.

Primary tumors of valves of the heart. G. DEAN and A. W. FALCONER. *J. Pathol. & Bacteriol.*, 1913, xviii, No. 1. [621]

Paroxysmal tachycardia in surgery. KAUSCH. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte*, 1913, ii, part 2, 110.

Pericardiolysis in a certain affection of the heart or supracardiac thoracotomy. H. DELAGENIÈRE. *Arch. prov. de Chir.*, 1913, xxii, 317. [621]

Further experimental studies on resorption in the region of the pericardium. GORINSTEIN. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Absorption through the pericardium. C. L. GORINSTEIN. *Beitr. z. klin. Chir.*, 1913, lxxxvi, 229.

Caseous pericarditis and accident. AUERBACH. *München. med. Wchnschr.*, 1913, lx, No. 33.

Pharynx and Œsophagus

Congenital occlusions of the œsophagus and lesser bowel. G. H. EDINGTON. *Glasgow M. J.*, 1913, lxxx, 90.

False teeth arrested in the œsophagus for eight days. KELBLING. *Med. Klin.*, Berl., 1913, ix, No. 32.

A case of stenosis of the œsophagus and pylorus from ingestion of a caustic liquid. CERVERA Y RUIZ and LUIS Y YAGUE. *Rev. iber.-am. de cien. med.*, Madrid, 1913, xxx, No. 107.

Congenital atresia of the œsophagus; gastrotomy. STEINERT. *Prag. med. Wchnschr.*, 1913, xxxviii, No. 32.

Means of facilitating alimentation in carcinoma of the œsophagus. W. KRIENITZ. *Deutsche med. Wchnschr.*, 1913, xxxix, 1200.

The surgical treatment of carcinoma of the œsophagus. WILLY MEYER. *München. med. Wchnschr.*, 1913, lx, 1316.

Cancer of the œsophagus. MELLO. *Med. contemp.*, Lisbon, 1913, xxxi, No. 32.

Plastic surgery of the œsophagus. HALPERN. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 194.

Miscellaneous

Thoracic wounds caused by fire-arms. HUGUIER. *Paris chir.*, 1913, v, No. 5.

A case of compression of the thorax resulting in hæmorrhages due to congestion. ZIMMERMAN. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

SURGERY OF THE ABDOMEN

Abdominal Wall and Peritoneum

Pfannenstiel's transverse incision. GODART. *Policlin.*, Brussels, 1913, xxii, No. 15.

Contributions on the subject of abdominal drainage. N. N. PETROFF. *Chir. arch. Veliaminova*, 1913, xxix, 195. [622]

A case of penetrating wound of the abdomen, with remarks on prophylaxis and treatment of peritonitis. F. WEBER. *München. med. Wchnschr.*, 1913, lx, 1772.

A tumor containing smooth muscle fibres discharged spontaneously through a laparotomy scar. IMBERT and MOIROUD. *Marseille méd.*, 1913, l, No. 16.

Paravesical chronically inflamed tumors of the abdominal wall. A. HOCK. *Ztschr. f. urol. Chir.*, 1913, i, 453.

Congenital defect of abdominal muscles, with anomaly of urinary apparatus. LEWIS THATCHER. *Edinb. M. J.*, 1913, xi, 127.

Rupture of the rectus muscles of the abdomen during gymnastics. ROMANTZEFF. *Vofenno-med. J.*, St. Petersburg, 1913, ccxxxvii, No. 4.

A case of echinococcus of the rectus muscle of the abdomen. FIRFAROFF. *Vrach. Gaz.*, 1913, vi, No. 23.

Subphrenic abscess. LEDDERHOSE. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 31.

Pathogenesis of some forms of post-operative subphrenic abscess. FASANO. *Gazz. d. Osp. e d. Clin.*, Milano, 1913, xxxiv, No. 91.

Retroperitoneal sarcoma. KRON. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 194.

Formation of retroperitoneal lipomata, with special consideration of lipomata of the mesentery. EBNER. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Gauze or rubber-tube drainage for the peritoneal cavity. J. Mo. St. M. Ass., 1913, x, 57.

Antiseptic tampon in peritonitis. CREDÉ. *Zentralbl. f. Chir.*, 1913, xl, 1373.

Acute progressive peritonitis. FISCHER. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

Tetany in perforating peritonitis. HOLLERDORF. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 31.

Biliary peritonitis. ROBERT VOGEL. *Wien. klin. Wchnschr.*, 1913, xxvi, 1153.

Free suppurative peritonitis due to pyosalpinx. JASPER HALPENNY. *Canad. Med. Ass. J.*, 1913, ii, 679.

Intraperitoneal employment of collargol in diffuse purulent peritonitis. R. JELKE. München. med. Wchnschr., 1913, lx, 1828.

Happy outcome of a case of tubercular peritonitis. GARRIGA. Rev. de Cien. med. de Barcelona, 1913, xxxix, No. 7.

A case of tubercular peritonitis cured at Lourdes. DAVID. J. d. sc. méd. de Lille, 1913, xxxvi, No. 32.

The treatment of ascitic tuberculous peritonitis (laparotomy and lavage with oxygen-impregnated water). GUACCERO. Clin. chir., Milano, 1913, xxi, No. 7.

The operative treatment of peritoneal and genital tuberculosis. O. SCHMIDT. Ztschr. f. Geburtsh. u. Gynäk., 1913, lxxiii, 404.

Pseudomyxoma of the peritoneum of appendicular origin. DELETTREX. Rev. de gynéc. et de chir. abdom., 1913, xxi, No. 1.

Atmospheric air in the abdomen following laparotomies. MAX COHN. Berl. klin. Wchnschr., 1913, l, 1352.

Abdominal adhesions. J. T. BURRUS. Va. Med. Semi-Month., 1913, xviii, 218.

Casuistics of rare form of inguinal hernia. CEREPNINE. Chirurgia, St. Petersburg., 1913, xxxiii, No. 194.

Inguinal hernias of the female genitalia, herniary adnexitis. DANIEL. Beitr. z. Geburtsh. u. Gynäk., 1913, xviii, No. 3.

Pathogenesis of encysted hernia and encysted communicating hernia. SULTAN and KURTZHALSS. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvii, No. 1.

Epigastric hernia. DELBET. J. d. Prat., Par., 1913, xxvii, No. 34.

Epigastric hernia of the stomach. MANTELLI. Gior. d. r. Accad. di Med. di Torino, 1913, lxxvi, No. 3-4.

Painful epigastric hernia as a symptom of gastric ulcer. ALESSANDRINI. Policlin., Roma, 1913, xx, No. 31.

Heo-appendicular hernia of the appendix. L. W. ALLEN. Surg., Gynec. & Obst., 1913, xvii, 191. [622]

Two cases of incarcerated internal hernia in the region of the bladder. TRNKA. Čas. lek. česk., 1913, lii, 873.

Retrograde incarceration of the intestine in hernias. VON WISTINGHAUSEN. Deutsche Ztschr. f. Chir., 1913, cxvii, 212. [622]

The reduction of hernia. F. G. GALE. Mass. M. J., 1913, No. 8, 295.

Local anæsthesia in the radical cure of hernia. T. K. OATES. W. Va. M. J., 1913, viii, 51.

Radical cure of hernia by buried sutures of metallic thread. ROUX DE BRIGNOLLES and WEILL. Marseille méd., 1913, l, No. 16.

Importance of early operation for the radical cure of hernia. H. W. AUSTIN. N. Y. M. J., 1913, xcvi, 319.

A new operation for the cure of indirect inguinal hernia. U. C. BATES. Northwest Med., 1913, v, 211.

Some reasons for advising no delay in operating all forms of hernia. J. FRANKEL. N. Y. M. J., 1913, xcvi, 378.

The radical operation of inguinal hernia. H. DRESSMANN. Verhandl. d. Gesellsch. deutsche Naturforsch. u. Ärzte, 1913, ii, part 2, 150.

Technique of radical operation for inguinal hernia. KLEINSCHMIDT. München. med. Wchnschr., 1913, lx, 1920.

An improvement upon the Lotheisen-Föderl radical operation in crural hernias by the employment of free aponeurotic grafts. GÖBEL. Zentralbl. f. Chir., 1913, xl, No. 32.

Plastic operation to close defect in inguinal hernia. E. POLYA. Virchow's Arch. f. path. Anat., etc., 1913, ccxiii, 504.

Prolapse of omentum and stomach caused by a punctured wound which penetrated the thoracic and abdominal cavities. ALFRED KIRSCHNER. Dissertation, Königsberg, 1913.

Primary hydatid cyst of the great omentum. FERRER. Presse med., Par., 1913, xxi, No. 64.

Abscess of the omental sac following necrosis of the pancreas. BITTORF. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 1.

Tumor of the omentum with twist of pedicle, giving symptoms of acute appendicitis. G. LEGIARDI-LAURA. Med. Rec., 1913, lxxiv, 205.

A case of thrombosis of the mesentery. DROUIN and PARCELIER. J. de Med. de Bordeaux, 1913, lxxxiv, No. 33.

Thrombosis of the mesentery. E. LAPLACE. Tr. Internat. Cong. Med., Lond., 1913, Aug. [623]

Dermoid cyst of the mesentery. CASTELLO. Rev. de Med. y Cir., Habana, 1913, xviii, No. 11.

Gastro-Intestinal Tract

Tests for secretion and motility of the stomach. J. SCHUTZ. Wien. med. Wchnschr., 1913, lxiii, 927.

Organacidia gastrica. MARK I. KNAPP. Med. Council, 1913, xviii, 293.

The relation of the röntgen picture of the human stomach to its anatomical structure. Contribution to the anatomy and physiology of the stomach. GÖSTA FORSELL. Arch. u. Atlas d. norm. u. path. Anat. in typischen Röntgenbildern, Hamburg, 1913, xii.

Present status of radiographic examination of stomach and intestines. HOLZKNECHT. Arch. d'electr. med., exp. et clin., 1913, xxi, No. 364.

Recent results obtained with radiology of the stomach. HÜRTER. Beitr. z. klin. Med., 1913, ix, 177.

The value of X-ray pictures in the air-distended stomach as a means of checking the bismuth picture. W. RÖPKE. Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte, 1913, ii, part 2, 190.

A method of obtaining a radiograph of the stomach at any particular phase of its contraction. C. THURSTAN HOLLAND. Arch. Röntg. Ray, 1913, xviii, 98. [623]

The positive value of the röntgen method in the diagnosis of gastric and duodenal lesions. A. W. GEORGE. Tr. Am. Röntg. Ray Soc., Boston, 1913, Oct. [623]

Study of the mechanism of the stomach after gastroenterostomy by means of the X-ray. JOHN H. OUTLAND, E. H. SKINNER and LOGAN CLENDENING. Surg., Gynec. & Obst., 1913, xvii, 175. [624]

Mechanism of stomach and gall-bladder. HOHLWEG. Med. Klin., Berl., 1913, ix, 1420.

The metabolism of creatin and creatinin in severe lesions of the stomach. LAURA ORIOLI. Internat. Beitr. z. Path. u. Therap. d. Ernährungsstör., 1913, iv, 421.

Diagnosis and differential diagnosis of gastro-duodenal lesions. L. G. COLE. Tr. Am. Röntg. Ray Soc., Boston, 1913, Oct. [624]

A case of acute dilatation of the stomach complicating pneumonia. EDWARD H. GOODMAN. N. Y. M. J., 1913, xcvi, 271.

The rôle of gastric and intestinal stasis in some cases of epilepsy. HALE POWERS. Boston M. & S. J., 1913, clxix, 189.

Indications afforded by X-rays for and against operations in diseases of the stomach and results of such operations. A. H. PIRIE. Tr. Am. Röntg. Ray Soc., Boston, 1913, Oct. [625]

Diagnosis of gastric ulcers suddenly penetrating into the free abdominal cavity. HANS RYSER. Cor.-Bl. f. schweiz. Ärzte, 1913, xliii, 961.

Pathology and treatment of ulcer of the stomach; diagnosis and treatment of chronic juxta-pyloric ulcer. KEMP. Ugesk. f. Læger, Kjøbenhavn, 1913, lxxv, Nos. 36-37.

Two cases of perforation of gastric ulcer. TIMBAL and LAVAU. Toulouse méd., 1913, xv, No. 15.

The digestion of living tissue in the stomach, and a study of the pathogenesis of round ulcer of the stomach. KAWAMURA. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 3.

Chronic juxta-pyloric ulcer of the stomach. FABER. Med. Klin., Berl., 1913, No. 34.

The production of ulcer of the stomach in the rat. CHARLES SINGER. Lancet, Lond., 1913, clxxxv, 279.

Late ulcer of the stomach. RISPAL and TIMBAL. Toulouse méd., 1913, xv, No. 14.

Experimental employment of X-ray treatment in gastric ulcer. EUGEN KODON. Fortschr. a. d. Geb. d. Röntgenstr., 1913, xx, 505.

Experiences in the surgical treatment of benign affections of the stomach and duodenum. A. HENLE. Verhandl. d. Gesellsch. deutscher Naturf. u. Ärzte, 1913, ii, 144. [625]

Diagnosis of gastric cancer. A. R. LENSMA. Northwest Med., 1913, v, 217.

Primary myosarcoma of the stomach and the diagnostic difficulties in tumors of the gastric wall. AMELUNG. Beitr. z. klin. Chir., 1913, lxxvi, No. 1.

Carcinoma of the stomach from a surgical standpoint. R. E. VENNING. W. Va. M. J., 1913, viii, 37.

Operative treatment of cancer of the stomach. WILLIAM J. MAYO. J. Am. M. Ass., 1913, lxi, 540.

The treatment of hæmatemesis. OTTO GRÜNBAUM. Practitioner, Lond., 1913, xci, 157.

Gastroscopy and its clinical value. LICHTENDORF. Russk. Vrach, St. Petersburg, 1913, xii, No. 32.

Some phases of surgery of the stomach. GEORGE WOOLSEY. N. Y. St. J. Med., 1913, xiii, 417.

Surgical indications of certain gastro-intestinal symptoms. J. DOUGLAS. N. Y. M. J., 1913, xcvi, 359.

Local anæsthesia in gastric surgery. COMBIER. Bourgogne méd., Dijon, 1913, xxi, No. 7.

Partial gastrectomy. S. W. F. RICHARDSON. So. African M. Rec., 1913, xi, 344.

Changes in the digestive process after gastro-duodenotomy, gastrojejunostomy, and total gastrectomy. DAGAEW. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 1.

Congenital stenosis of the pylorus. A. STRAUCH. Med. Rec., 1913, lxxxiv, 386.

Congenital hypertrophic stenosis of the pylorus. C. G. MIXTER. Boston M. & S. J., 1913, clxix, 309.

Stenosis of the pylorus and the formation of a ligamentum suspensorium ventriculi by transplantation of free aponeurotic fascia. RUDOLF GÖBEL. Zentralbl. f. Chir., 1913, xl, 1332.

Congenital pyloric stenosis, with report of case. L. S. BOOKER. Va. M. Semi-Month., 1913, xviii, 243.

The technique of exclusion of the pylorus. POLYA. Zentralbl. f. Chir., xl, No. 34.

The technique of exclusion of the pylorus. ADOLPH HOFFMANN. Zentralbl. f. Chir., 1913, xl, 1331.

Technique of X-ray examination of the duodenum. O. DAVID. Zentralbl. f. inn. Med., 1913, xxxiv, 531.

Diagnostic value of radiology in diseases of the duodenum, based on 31 operative cases. MÜLLER. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 1.

Permanent alimentation through a duodenal sound. PAUL LAZARUS. Berl. klin. Wchnschr., 1913, l, 1391.

Indications for duodenal alimentation. M. EINHORN. Deutsche med. Wchnschr., 1913, xxxix, 1404. [626]

Symptoms, diagnosis and treatment of duodenal ulcer. ROERSCH. Scalp. et Liege med., 1913, lxvi, No. 7.

Duodenal ulcer. ROSENGART. München. med. Wchnschr., 1913, lx, 1737.

Duodenal ulcer of nervous origin. WESTPHAL and KATSCH. Mitt. a. d. Grenzgeb. d. Med. u. Chir., 1913, xxvi, No. 3.

Duodenal ulcer with illustrative cases. L. H. HEMPELMANN. Interst. M. J., 1913, xx, 726.

Further experiences with duodenal ulcer. M. EINHORN. Med. Rec., 1913, lxxxiv, 369.

Hæmorrhagic form of duodenal ulcer. CASTAIGNE. J. de Med. et de Chir., Montreal, 1913, viii, No. 6.

Duodenal treatment. ROSENBERGER. Med. Klin., Berl., 1913, ix, No. 31.

Jejunostomy. PAUCHET. Clinique, Par., 1913, vii, No. 34.

The physiology of gastro-jejunostomy. H. J. PATERSON. Tr. Internat. Cong. Med., Lond., 1913, Aug. [626]

Intestinal obstruction. JOHN A. HARTWELL. J. Exp. Med., 1913, xviii, 113.

Intestinal invagination. DOBRUCKI. Prezgl. chir. i ginéc., 1913, ix, 73.

A case of volvulus of the small intestine complicating general peritonitis; recovery. C. WILLETT CUNNINGTON. Lancet, Lond., 1913, clxxxv, 387.

The diagnosis of intussusception. I. M. SNOW and M. CLINTON. Am. J. Dis. Children, 1913, vi, 93.

Intussusception of the stomach and duodenum due to a gastric polypus. H. WADE. Surg., Gynec. & Obst., 1913, xvii, 184.

Acute intussusception. H. LETT. Clin. J., 1913, xlii, 312.

Congenital multiple atresia of the small intestine. PETRIVASKY. Čas. lek. česk., 1913, lii, 871.

Intestinal occlusion and the value of radiology in the diagnosis of intestinal stenosis. MATHIEU. J. d. Prat., Par., 1913, xxvii, No. 33.

A case of intestinal occlusion with congenital retro-position of the large intestine. RÖVSING. Hosp.-Tid., Kjøbenhavn, 1913, lvi, No. 31.

Fœtal peritoneal folds and their relation to post-natal chronic and acute occlusions of the large and small intestine. J. R. EASTMAN. J. Am. M. Ass., 1913, lxi, 625. [627]

Treatment of ileus caused by post-operative adhesions. ZAHRADNICKY. Wien. med. Wchnschr., 1913, lxii, No. 32.

Malpositions of the abdominal viscera in intestinal stasis. D. Y. KEITH. Ky. M. J., 1913, xi, 638.

Chronic intestinal stasis. L. MILLER KAHN. N. Y. M. J., 1913, xcvi, 274.

Surgical aspects of intestinal stasis from an anatomic point of view. J. E. SUMMERS. J. Am. M. Ass., 1913, lxi, 639. [628]

Diffuse adenomatous intestinal polyposis. SCAGLIOSI. Deutsche med. Wchnschr., 1913, xxxix, No. 31.

Intestinal polyposis of intestinal polyadenomatosis. BOHAY. Jahrb. f. Kinderh. u. phys. Erzieh., 1913, lxxviii, No. 2.

A case of pneumatosis cystoides intestinorum. MIASNIKOFF. Vrach. Gaz., 1913, vi, No. 8.

The surgical and pathological importance of certain intestinal parasites. GRÜNBAUM. Dissertation, Heidelberg, 1913.

Mucous cyst of the cæcum in an infant 10 weeks old, producing obstruction of the ileocecal valve and symptoms simulating intussusception. A. D. BLACKADER. Am. J. Dis. Children, 1913, vi, 99.

Lipoma of the cæcum causing an invagination; laparotomy, disinvagination, removal of the tumor; recovery. MARIANO CICALO. Clin. chir., Milano, 1913, xxi, No. 7.

Hypertrophic ileocecal tuberculosis in a patient with pulmonary tuberculosis. SANTY and DURAND. Lyon méd., Lyon, 1913, cxxi, No. 31.

Pinching the appendix in the diagnosis of chronic appendicitis. ANTHONY BASSLER. *Am. J. M. Sc.*, 1913, cxlvi, 204.

Diagnosis of atonic condition of the appendix. HEINRICH STERN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1305.

Diagnosis of important pathological changes associated with inflammation of vermiform appendix for treatment. WALTER GRIESS. *Lancet-Clin.*, 1913, cx, 174.

An appendix free in the abdominal cavity without suppurative peritonitis. J. WAGNER. *Med. Rec.*, 1913, lxxxiv, 339.

Inflammatory diverticula of the appendix. TICHOMIROFF. *Vrach. Gaz.*, St. Petersburg, 1913, xx, 650.

The appendix and some of its diseases. H. H. HIESCHER. *N. Y. M. J.*, 1913, xcvi, 373.

The pathogenesis of so-called "chronic inflammation of the appendix." DOBBERTIN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1549.

Present status of blood examination in appendicitis and progressive appendicular peritonitis. SCHULTZE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

Traumatic appendicitis. SCHWABE. *Ztschr. f. Versicherungsmed.*, 1913, vi, 225.

Chronic appendicitis in its relation to hyperacidity of the gastric juice. H. ILLOWAY. *N. Y. M. J.*, 1913, xcvi, 224.

Faulty circulation of the blood in Arneth's apparatus in chronic appendicitis. SAMOILLO. *Chirurgia, St. Petersburg*, 1913, xxxiii, No. 194.

Appendicitis in war. YERSIN. *Rev. suisse de méd.*, 1913, xiii, No. 22.

Appendicitis complicated by abscess of the liver. LASTOTCHKINE. *Vrach. Gaz.*, 1913, vi, No. 13.

Pseudomyxomatous cyst of the appendix. HAMMESFAHR. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 31.

Dermoid cysts developed between the leaves of the meso-appendix; their differential diagnostic points from appendiceal tumors. WILLEMS. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Reply to Koffman's views on extirpation of the appendix. E. SONNENBURG. *Zentralbl. f. Chir.*, 1913, xl, 1364.

Treatment and pathology of appendicitis. BENJAMIN S. PURSE. *Med. Rec.*, 1913, lxxxiv, 296.

When to operate in acute appendicitis. C. M. SWALE. *Iowa M. J.*, 1913, xx, 69.

Post-operative treatment in appendix operations. SORGE. *Berl. klin. Wchnschr.*, 1913, l, No. 32.

Pathology of the large intestine; diverticulum. PAUCHET. *Clinique, Par.*, 1913, viii, No. 31.

Volvulus of the large intestine. ED. BUNDSCHUH. *Beitr. z. klin. Chir.*, 1913, lxxxv, 58.

The operative treatment of malignant disease of the large intestine, excluding the rectum. W. KÖRTE. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [628]

Deposits of lamellæ in the region of the proximal segment of the large intestine as an anatomical formation (ligamentum varioforme). REZANOFF. *Chirurgia, St. Petersburg*, 1913, xxxiii, No. 194.

Surgery of the large intestine with the exception of the rectum. B. K. FINKELSTEIN. *Arch. f. klin. Chir.*, 1913, ci, 936.

X-ray observations on colonic peristalsis and antiperistalsis with special reference to the function of the ileocolic valve. J. T. CASE. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [628]

Ulcerative colitis. ANTHONY BASSLER. *Interst. M. J.*, 1913, xx, 707.

Ulcerative colitis. JULIAN KRETSCHMER. *Zentralbl. f. d. Grenzgeb. d. Med. u. d. Chir.*, 1913, xvii, 66.

A brief survey of the prognosis and treatment of con-

genital and acquired dilatation of the colon. LEWIS J. FRIEDMAN. *Am. J. Surg.*, 1913, xxvii, 291.

A case of Hirschsprung's disease. H. C. VAN DEN VRIJHOEF. *Wien. klin. Wchnschr.*, 1913, xxvi, 1309.

The diagnosis of Hirschsprung's disease. FRANK. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

The ultimate nervous results of acute angulation of the sigmoid and the consequent faecal stasis. W. H. AXTELL. *Northwest Med.*, 1913, v, 215.

Surgical treatment of chronic constipation. A. E. HERTZLER. *J. Mo. St. M. Ass.*, 1913, x, 48.

Experimental transplantation of intestine after extensive excision of the sigmoid. J. SHELTON HORSLEY. *J. Am. M. Ass.*, 1913, lxi, 544.

Mobilization of the base of the pelvic mesocolon to re-establish direct continuity of the intestine in resection of the iliac colon and the terminal portion of the descending colon. VIGNOLO. *Rif. med.*, Naples, 1913, xxix, No. 33.

Polyposis of the rectum. BORMAN. *Vrach. Gaz.*, 1913, vi, No. 20.

Continence of the bowel after radical operation for carcinoma of the rectum. HERBERT KÖRBL. *Arch. f. klin. Chir.*, 1913, ci, 449. [629]

The treatment of prolapse of the rectum in children. FELIX PIELSTICKER. *Monatschr. f. Kinderh.*, 1913, xii, 111.

Amputation of the rectum with exclusion of the pelvic colon. G. KELLING. *Zentralbl. f. Chir.*, 1913, xl, 947.

Permanent artificial anus. CARL. *Beitr. z. klin. Chir.*, 1913, lxxxvi, No. 1.

Sphincteric atrophy; causes, consequence and treatment. RALPH W. JACKSON. *Boston M. & S. J.*, 1912, clxix, 221.

Topography and function of the normal digestive organs studied with the aid of radiography; localization of foreign bodies in their interior. CATCHEVITCH. *Srpski arh. za celok. lek.*, Beograd, 1913, xix, No. 233.

Results obtained by deep topographic palpation of the digestive canal. HAUSMANN. *Berl. klin. Wchnschr.*, 1913, l, No. 32.

Experimental radiological studies on the physiology and pathology of the alimentary tract. R. LENK and F. EISLER. *München med. Wchnschr.*, 1913, lx, 1031. [630]

The technique of röntgen-ray examination of the gastrointestinal tract and the interpretation of screen and plate findings. R. D. CARMAN. *J. Am. M. Ass.*, 1913, lxi, 321. [630]

Syphilis of the gastro-intestinal tract. J. G. WELLS. *Post-Graduate*, 1913, xxviii, 715.

Recent treatment of gastro-intestinal stasis due to ptosis of the alimentary canal. T. J. B. KELLY. *Australas. M. Gaz.*, 1913, xxxiv, 172.

Liver, Pancreas, and Spleen

Ptosis of the liver and X-rays. GOBEAUX. *Ann. de la Policlin. centr. de Brux.*, 1913, xiii, No. 6.

Cirrhosis of the liver. J. M. WHYTE. *Clin. J.*, 1913, xlii, 317.

Etiological differential diagnosis and interpretation of cirrhoses of the liver. CAILLIAU. *Gaz. d. hôp.*, Par., 1913, lxxxvi, No. 94.

Operative method of treatment of ascites in cirrhosis of the liver. MANTELLI. *Gior. d. r. Accad. di Med. di Torino*, 1913, lxxvi, Nos. 3-4.

Diseases of the liver and gall passages; a contribution to tropical surgery. R. LESK. *Geneesk. Tijdschr. voor Ned. Ind.*, 1913, liii, 356.

Diagnosis of abscess of the liver. CORDARELLI. *Boll. d. Clin.*, xxx, No. 7.

Traumatic abscess of the liver. D'AGOSTINO. *Rif. med.*, Naples, 1913, xxix, No. 33.

A case of abscess of the liver in appendicitis. BARADOUINE. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 194.

Abscess of the liver after scarlet fever in child eight years old. MOURAVIEFF. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 194.

Treatment of abscess of the liver. PLICQUE. *Bull. méd.*, Par., 1913, xxvii, No. 61.

Hydatid cyst of the liver. W. M. SOWERS. *Va. M. Semi-Month.*, 1913, xviii, 241.

Multiple unilocular echinococcal cysts of the liver and spleen. VICHNEVSKY. *Sibirsk. Vrach. Gaz.*, 1913, vi, No. 30.

Spontaneous suppuration of echinococci of the liver. RITTERSHAUS. *Beitr. z. klin. Chir.*, 1913, lxxxv, 641.

Early recognition of surgical lesions of the liver. C. R. OGDEN. *W. Va. M. J.*, 1913, viii, 46.

Applicability of fascia lata in resections of the liver. B. CHESIN. *Zentralbl. f. Chir.*, 1913, xl, 1173.

Cholelithiasis. A. AOYAMA. *Beitr. z. path. Anat. u. z. allg. Path.*, 1913, lvii, 168.

Cholelithiasis associated with duodenal ulcer and pancreatic abscess. FRANZ VON FINK. *Prag. med. Wchnschr.*, 1913, xxxviii, 396.

Cholelithiasis with a short review of one hundred necropsies. W. OPHULS. *Cal. St. J. M.*, 1913, xi, 306.

Gall-stones. F. J. STEWARD. *Clin. J.*, 1913, xlii, 305.

The diatetic treatment of gall-stones. SALOMON. *Med. Klin.*, Berl., 1913, ix, 1317.

Management after gall-stone operations. WELLER VAN HOOK. *Iowa M. J.*, 1913, xx, 79.

The influence on gastric secretion of aseptic foreign bodies in the gall-bladder. O. H. PERRY PEPPER. *Am. J. M. Sc.*, 1913, cxlvi, 220.

Gall-tract disease; some clinical features frequently overlooked in its diagnosis. C. M. COOPER. *Cal. St. J. M.*, 1913, xi, 301.

The symptomatology of gall-bladder disease. H. C. MOFFITT. *Cal. St. J. M.*, 1913, xi, 306.

Surgical treatment of gall-bladder disease. W. I. TERRY. *Cal. St. J. M.*, 1913, xi, 304.

Anomalous ligament of the gall-bladder. KONJETZNY. *Zentralbl. f. Chir.*, 1913, xl, 1408.

Cholecystostomy by oblique fistula. JOSEPH WIENER. *Surg., Gynec. & Obst.*, 1913, xvii, 232.

What is the origin of pure cholesterol calculi? ASCHOFF. *München. med. Wchnschr.*, 1913, lx, No. 32.

The origin of so-called "white bile" in absolute and permanent occlusion of the choledochus. BERTOG. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

So-called biliary peritonitis. SICK and FRANKEL. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

Hæmorrhagic pancreatitis. W. D. HAINES. *Lancet-Clin.*, 1913, cx, 198.

Chronic pancreatitis. SCHMIDT. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

Acute necrosis of the pancreas. J. GOBIET. *Wien. klin. Wchnschr.*, 1913, xxvi, 1381.

A case of fatty necrosis of the pancreas. CHODJACHE. *Russk. Vrach.*, St. Petersburg, 1913, xii, No. 31.

A rare case of hydatid cyst of the pancreas cured by marsupialization. G. PARLAVECCHIO. *Pensiero méd.*, 1913, No. 2. [631]

Surgery of the pancreas. HABS. *Med. Klin.*, Berl., 1913, ix, 1277.

The amount of work done by the spleen. FRITZ. *Verzár. Biochem. Ztschr.*, 1913, liii, 69.

Pathology of the function of the spleen. EPPINGER. *Berl. klin. Wchnschr.*, 1913, l, No. 34.

A new contribution on physiology of the spleen; iron content of the bile and blood of splenectomized animals. ANGELO PUGLIESESE. *Biochem. Ztschr.*, 1913, lii, 423.

Subcutaneous traumatic rupture of the spleen and its treatment. L. NORRLIN. *Upsala Läkaref. Förh.*, N. F. 1913, xviii, 214. [631]

A rare disease of the spleen; sarcoma alveolaris or endothelioma lienis. COULKOFF. *Vrach. Gaz.*, 1913, vi, Nos. 16-17-18.

Banti's disease. R. GRÜTZNER. *Fortschr. d. Med.*, 1913, xxxi, 869.

The relation of the spleen to active immunity from tumors. A supplement and correction with regard to the article of the same title by H. Apolani. A. BRAUNSTEIN. *Ztschr. f. Immunitätsforsch.*, 1913, xviii, 330.

The inhibitory influence of the spleen upon the growth of rat sarcomas. PAUL BIACH and OSCAR WELTMANN. *Wien. klin. Wchnschr.*, 1913, xxvi, 1115. [632]

A case of splenomegaly. KRAUS. *Berl. Wchnschr.*, 1913, l, No. 31.

The treatment of primary splenomegaly, especially by exsplenopexy. PARLAVECCHIO. *Clin. chir.*, Milano, 1913, xxi, No. 7.

Splenomegaly associated with hepatic cirrhosis during the ascitic period, splenectomy and Calma's operation; contribution to the study and treatment of chronic splenomegaly due to thrombosis of the splenic circulatory system. TANSINI and MORONE. *Rev. de chir.*, Par., 1913, xxxiii, No. 8.

Miscellaneous

Diagnosis in abdominal emergencies. WILLIAM SHEEN. *Clinical J.*, 1913, xlii, 273.

Clinical interpretation of chronic abdominal enlargement in children, with especial reference to a new differential sign between rachitis and tuberculous peritonitis. H. B. SHEFFIELD. *Med. Rec.*, 1913, lxxxiv, 382.

Sensitiveness of the abdominal cavity. KAPPIS. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 3.

The hæmostatic action of fatty tissue in injuries of parenchymatous organs of the abdomen. A. POLENOFF and M. LADYGIN. *Vrach. Gaz.*, St. Petersburg, 1913, xx, 737. [632]

The elevated head and trunk position in the treatment of surgical lesions of the abdomen. R. S. FOWLER. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [632]

Concerning visceral organisms. A. CARREL. *J. Exp. Med.*, 1913, xviii, 155. [633]

SURGERY OF THE EXTREMITIES

Diseases of Bones, Joints, Muscles, Tendons— General Conditions Commonly Found in the Extremities

Köhler's bone disease. C. BLES. *München. med. Wchnschr.*, 1913, lx, 1941.

Tuberculosis of bones and joints. VEREBELY. *Pest. med.-chir. Presse*, Budapest, 1913, xlix, No. 33.

The employment of the X-ray in tuberculosis of bones and joints. E. A. OPPENHEIM. *Berl. klin. Wchnschr.*, 1913, l, 1433.

The treatment of surgical tuberculosis by natural and

artificial light. OSKAR VULPIUS. *Strahlentherapie*, 1913, iii, 104.

The treatment of surgical tuberculosis by artificial light. RICHARD HAGEMANN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1450.

Heliotherapeutic and air treatment of surgical tuberculosis. PAUL GLÄSSNER. *Berl. klin. Wchnschr.*, 1913, l, 1434.

The conservative methods of treating surgical tuberculosis. ED. MENNE. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 357.

Tuberculin therapy in surgical tuberculosis with the correct dosage accurately determined by the cutaneous reaction. B. Z. CASHMAN. *Am. J. M. Sc.*, 1913, cxlvi, 213.

Syphilitic bone and joint conditions. H. W. FRAUENTHAL. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [633]

Acute osteomyelitis and plastic operations on bone in childhood; from the material of the Emperor and Empress Frederick Children's Hospital from 1890-1912. F. WACHSNER. *Arch. f. Kinderh.*, Stuttg., 1913, lx-lxi, *Festschr. f. Adolf Baginsky*, 748. [634]

Acute osteomyelitis of the pubes. THOMSCHKE. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 290.

Traumatic dissecting epiphysitis of the tibia in adolescence. EBBINGHAUS. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 32.

Typhoid periostitis. H. W. DACHTLER. *Tr. Am. Röntg. Ray. Soc.*, Boston, 1913, Oct. [634]

Family chondro dystrophy. G. A. WAGNER. *Arch. f. Gynäk.*, 1913, c, 70.

Experimental scorbutus and the röntgen-ray diagnosis of scorbutus. TALBOT, DODD, and PETERSON. *Boston M. & S. J.*, 1913, clxix, 232. [634]

The pathology of idiopathic osteopsathyrosis. DENIS G. ZESAS. *Deutsche Ztschr. f. Chir.*, cxxiii, 380.

Blue sclera and osteopsathyrosis. A. PETERS. *Klin. Monatsbl. f. Augenh.*, 1913, li, 594.

Echinococci of the bones. A. EBERLE. *Chirurgia*, St. Petersburg, 1913, xxxiii, 781.

Osteomalacia and psychosis. W. M. VAN DER SCHEER. *Arch. f. Psychiat.*, 1913, l, 845. [635]

Multiple cartilaginous exostoses. G. AVÉ-LALLEMANT. *Fortschr. a. d. Geb. d. Röntgenstr.*, 1913, xx, 439.

Bone cysts; osteitis fibrosa and multiple exostoses. N. PAUS. *Norsk. Mag. f. Lægevidensk.*, Christiania, 1913, lxxiv, 634. [635]

Two cases of primary endothelioma of the bones. ABETTI. *Policlin.*, Roma, 1913, sez. chir., xx, No. 8.

Regeneration of bone from periosteum. S. L. HAAS. *Surg., Gynec. & Obst.*, 1913, xvii, 164. [635]

Unusual bone lesions. ADOLPH HARTUNG. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [636]

Diseases of joints and bone marrow. LEONARD W. ELY. *Am. J. Surg.*, 1913, xxvii, 309. [636]

Tabetic osteoarthropathies. M. J. CETCHOWITCH. *Russk. Vrach.*, 1913, xii, 960.

Physiotherapy of joint diseases, especially tuberculosis. M. WILMS. *Ztschr. f. orthop. Chir.*, 1913, xxxii, 321.

The technique of diathermal treatment of affections of the joints. ALBERT E. STEIN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1308.

Modern out-patient and ambulatory treatment of joint tuberculosis, especially tuberculosis of the hip. BECKER and PAPPEDECK. *Med. Klin.*, Berl., 1913, No. 34.

A case of congenital ankylosis of the humero-ulnar joint. CRAMER. *Zentralbl. f. chir. u. mech. Orthop.*, 1913, vii, No. 9.

Presentation of operated cases of ankylosis. A. SCHANZ. *Zentralbl. f. Chir.*, 1913, xl, 1339.

Uric acid arthritis in the X-ray picture. EUGEN JACOBSON. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, 531.

The etiology of arthritis deformans. KARL WAGNER. *Wien. med. Wchnschr.*, 1913, lxiii, 1907.

Treatment of arthritis deformans. G. A. WOLLENBERG. *Ztschr. f. orthop. Chir.*, 1913, xxxii, 442.

Gonorrhœal arthritis. MAUCLAIRE. *Prog. méd.*, Par., 1913, xlv, No. 31.

Good effect of local use of salicylic acid in gonorrhœal arthritis. A. S. SOLOWZOWA. *Russk. Vrach.*, 1913, xii, 992.

Etiology of rheumatism. WOODSON MOSS. *Med. Herald*, 1913, xxxii, 283.

Acute rheumatism. FREDERICK H. THOMPSON. *Med. Sentinel*, 1913, xxi, 1074.

Treatment of rheumatism. E. H. MARTIN. *Med. Herald*, 1913, xxxii, 285.

Chondroma of the capsule of the shoulder joint. HAGEMANN. *Med. Klin.*, Berl., 1913, ix, No. 31.

Hip-joints. CRAMER. *Zentralbl. f. chir. u. mech. Orthop.*, 1913, vii, No. 9.

The mechanical treatment of hip disease. J. RIDLON. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [636]

Contracture of the hip joint in tuberculous coxitis. R. WERNDORFF. *Ztschr. f. orthop. Chir.*, 1913, xxxii, 201.

The pathology of the knee-joint. FERDINAND BÄHR. *Deutsche med. Wchnschr.*, 1913, xxxix, 1462.

Penetrating wounds of the knee-joint. MÜLLER. *Zentralbl. f. Chir.*, 1913, xl, 1108.

Injection of vaseline into the joints. THORKILD RÖVSING. *Hosp.-Tid.*, Kjøbenh., 1913, lvi, 859.

Atrophy of muscles in affections of the joints. J. H. TEUJI. *Nippon-geka-Gakkai-Zasshi*, 1913, xiv, 172.

Primary muscle sarcomata. F. LANDOIS. *Versamml. d. Gesellsch. deutscher Naturforsch. u. Ärzte*, 1913, ii, ix.

The cavernous form of muscular angioma. BORCHARD. *Beitr. z. path. Anat. u. z. allg. Path.*, 1913, lvii, 30.

Operative paralysis of the muscular triangularis. MANASSE. *Zentralbl. f. Chir.*, 1913, xl, No. 33.

Retrocalcaneal bursitis. CHARLES STANLEY WHITE. *N. Y. M. J.*, 1913, xcvi, 263.

A case of gonorrhœal tendovaginitis. RAUSCHENBERGER. *München. med. Wchnschr.*, 1913, lx, 1828.

Simple ganglion at the wrist. EDWARD H. SCHOTT. *Hosp. Bull. Univ. Md.*, 1913, ix, 107.

Pathological changes in the tendon sheaths after injuries to the fingers. W. STEMPER. *Ärztl. Sachverst.-Zeit.*, 1913, xix, 340.

Operative treatment of gangrene of the lower extremities. A. LIDSKJ. *Vrach. Gaz.*, St. Petersburg, 1913, xx, 991.

Fractures and Dislocations

Address in Surgery — Fractures and their treatment. J. ALEX. HUTCHISON. *Canad. J. Med. & Surg.*, 1913, xxxiv, 93.

Spontaneous fractures as a result of syphilis. RUHEMANN. *Ärztl. Sachverst.-Zeit.*, 1913, xix, 357.

Spontaneous fracture in carcinoma of the bones. G. W. HAWLEY. *Am. J. Orth. Surg.*, 1913, xi, 139.

The reposition of fractured bones under local anæsthesia. B. DOLLINGER. *Zentralbl. f. Chir.*, 1913, xl, 763. [637]

Juxta-epiphyseal sprain and sprain fracture of the lower end of the radius. KELLOGG SPEED. *Surg., Gynec. & Obst.*, 1913, xvii, 241. [637]

The nail extension treatment of fractures. PETSCHKE. *Zentralbl. f. Chir.*, 1913, xl, No. 31.

Comment upon Kulenkampff's article entitled "On the technique of Steinmann's nail extension treatment." STEINMANN. *Zentralbl. f. Chir.*, 1913, xl, No. 31.

Reply to Steinmann's remarks. KULENKAMFF. *Zentralbl. f. Chir.*, 1913, xl, No. 31.

Experiences with Steinmann's nail extension method in fractures of the femur. JOHN C. A. GERSTER. *Am. J. M. Sc.*, 1913, cxlvi, 157.

An apparatus for nail extension treatment which will not become displaced. N. SPIEGEL. *Deutsche med. Wchnschr.*, 1913, xxxix, 1205.

Treatment of radial fractures. A. TROELL. *Allm. sven. Läkartidn.*, Stockholm, 1913, x, 577. [638]

Fracture of the humerus with radial paralysis. DELBET. *J. d. Prat.*, Par., 1913, xxvii, No. 31.

Current methods of treating fractures of the limbs. VEGNER. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 193.

Fractures and pseudarthroses of the bones of the leg in infants. KIRMISSON. *J. d. Prat.*, Par., 1913, xxvii, No. 32.

Fracture of the femur. G. E. ARMSTRONG. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [638]

Rare form of fracture of the knee-joint. O. BREHM. *St. Petersburg. med. Ztschr.*, 1913, xxxviii, 189.

Fractures of the knee-joint. GOTTSTEIN. *Zentralbl. f. Chir.*, 1913, xl, 1145.

An interesting case of fracture of the lower third of the leg, with epiphyseal separation of the tibia; its mechanism and the mechanism in general of fractures of the lower third of the leg. BOUVIER. *J. d. med. de Bordeaux*, 1913, lxxxiv, No. 32.

Three cases of complicated luxation. ALHAIQUE. *Rif. med.*, Naples, 1913, xxix, No. 31.

A rare complication of luxation of the humerus. CIPOLLINO. *Gazz. d. osp. e d. Clin.*, Milano, 1913, xxxiv, No. 93.

A typical injury of the medial condyle of the femur. PAUL EWALD. *München. med. Wchnschr.*, 1913, lx, 1662.

Congenital backward luxation of the knee-joint. LAZARAGA. *Med. Klin.*, Berl., 1913, ix, 1037.

A rare case of congenital luxation of the knee-joint. ALFRED WACHTER. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 190.

Injury of the crucial ligaments of the knee-joint. H. GÖTJES. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 221.

Luxation of the internal meniscus of the right knee; reduction. ROUX DE BRIGNOLLES. *Marseille méd.*, 1913, l, No. 16.

Lateral displacement of the meniscus. BLECHER. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 601.

Rare traumatic injuries of the foot (posterior luxation of the foot). P. M. FRASSIN. *Chirurgia*, St. Petersburg, 1913, xxxiii, 808.

Luxation of the foot below the ankle. NIC PAUS. *Norsk. Mag. f. Lægevidensk.*, Christiania, 1913, lxxiv, 634.

Surgery of the Bones, Joints, etc.

The open treatment of fractures; a few remarks. P. DE WITT. *Nashville J. M. & S.*, 1913, cvii, 337.

An absorbable plate for use in open treatment of fractures. ALEXIUS MCGLANNAN. *J. Am. M. Ass.*, 1913, lxi, 333.

Open treatment of fractures (osteosynthesis) with special consideration of the permanent results obtained. TRÖLL. *Nord. med. Arch.*, Stockholm, 1913, xli, (Chir. F. 1).

A review of the treatment of old fractures of the patella. GUÉNU and GATELLIER. *Rev. de chir.*, Par., 1913, xxxiii, No. 8.

Cauterization of bone for loss of substance before filling the cavity. FIORAVANTI. *Ref. med.*, Naples, 1913, xxix, No. 31.

Plugging bone cavities with free transplantation of fat. M. KRABBEL. *Beitr. z. klin. Chir.*, 1913, lxxxv, 400. [639]

A case of bone graft from one man to another for the restoration of the lower half of the femur. RÖVSING. *Hosp.-Tid.*, Kjøbenhavn., 1913, lvi, No. 31.

Three attempts at grafts of bones and joints. MAUCLAIRE. *Bull. med.*, Par., 1913, xxvii, No. 66.

Repair of a phalanx of a finger. LEXER. *München. med. Wchnschr.*, 1913, lx, 1855.

Treatment of syndactylism. G. LERDA. *Zentralbl. f. Chir.*, 1913, xl, 1396.

The operative treatment of snapping hip, of luxatio tractus iliotibialis traumatica. R. WEISS. *Monatschr. f. Unfallheilk. u. Invalidenwesen*, 1913, xx, 162. [639]

Mobilization of ankylosed hip-joints. BACHMANN. *Zentralbl. f. Chir.*, 1913, xl, 1337.

The end results of Lexer's arthrodesis of the ankle-joint. M. SCHEWANDIN. *Arch. f. klin. Chir.*, 1913, ci, 1009. [639]

Experimental researches on the rôle of the epiphyseal cartilage in operative interventions in the joints. RAZZABONI. *Policlin.*, Roma, sez. chir., 1913, xx, No. 8.

Resection of the posterior tarsus. DEPAGE. *Ann. Soc. belge de chir.*, 1913, xxi, 97. [639]

Free transplantation of muscles. R. GÖBEL. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte*, 1912, Part 2, 143.

Tendon transplantation on talipes from anterior poliomyelitis. B. F. ZIMMERMAN. *Am. J. Surg.*, 1913, xxvii, 297. [640]

Tendon fixation—an operation for the prevention of deformity in infantile paralysis. W. E. GALLIE. *Am. J. Orth. Surg.*, 1913, xi, 151.

Transplantation of the intermediate cartilage to the distal epiphysis of the radius. HELLER. *Zentralbl. f. Chir.*, 1913, xl, 1376.

Surgical treatment of the consequences of infantile paralysis. WEILL. *Marseille méd.*, 1913, l, No. 15.

Orthopedics in General

Value of medical inspection of schools in regard to orthopedic diseases in general and deviations of the spinal column in particular. MUTEL. *Rev. med. de l'Est*, Nancy, xlv, 1913, No. 15.

Orthopedic surgery. GUST. ALBERT WOLLENBERG. *Leitfäd d. prakt. Med.*, Leipzig, 1913, vii.

Progress in orthopedic surgery. J. K. YOUNG. *Pediatrics*, 1913, xxv, 500.

Indications for orthopedic surgical treatment in infantile paralysis. ALSBERG. *Klin.-therap. Wchnschr.*, 1913, xx, No. 32.

The treatment of old congenital luxations of the hip-joint. CRAMER. *Zentralbl. f. chir. u. mech. Orthop.*, 1913, vii, No. 9.

The X-ray photograph of Genu valgum. MOLINEUS. *Ztschr. f. orthop. Chir.*, 1913, xxxii, 247.

Large plaster cast of the lower extremity (apparatus for coxalgia). SOUBEYRAN. *Prov. med.*, Par., 1913, xxvi, No. 32.

Hallux varus. DUBAR and VERHAEGHE. *L'Echo med. du Nord*, Lille, 1913, xvii, No. 33.

A simplified sole for wear in flat-foot. BRANDENBERG. *Zentralbl. f. chir. u. mech. Orthop.*, 1913, vii, No. 9.

Bandage to be applied under plaster in treatment of club-foot. SPRENGEL. *München. med. Wchnschr.*, 1913, lx, 1490.

Human carriers in poliomyelitis. W. P. LUCAS and R. E. OSGOOD. *Am. J. Orth. Surg.*, 1913, xi, 135. [640]

SURGERY OF THE SPINAL COLUMN AND CORD

- Röntgen ray diagnosis of the lumbar spine and the sacro-iliac articulations. C. H. BUCHOLZ. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [640]
- Compressed fracture of the spinal column while skiing. GRÖNDAHL. *Norsk. Mag. f. Lægevidn.*, Christiana, 1913, lxxiv, No. 8.
- Congenital presacral tumors. FARIN. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, Nos. 5-6.
- A frequent anomaly of the lower thoracic spinal column. WILHELM GUNDERMANN. *München. med. Wchnschr.*, 1913, lx, 1878.
- Defects within the lower spinal canal. HORACE REED. *J. Okla. St. Med. Ass.*, 1913, vi, 114.
- The clinical significance of occult spina bifida. EUGEN BIBERGEIL. *Berl. klin. Wchnschr.*, 1913, l, 1481.
- Ankylosis of the spinal column. R. GOLANT. *Russk. Vrach, St. Petersburg.*, 1913, xii, 1029.
- Rigidity of ankylosis of the spine with nervous symptom complex. BECHTEREFF. *Russk. Vrach, St. Petersburg.*, 1913, xii, Nos. 30-31.
- Rigidity of the vertebral column. HOLANT. *Russk. Vrach, St. Petersburg.*, 1913, xii, No. 29.
- Scoliosis; its prognosis. JOHN L. PORTER. *Am. J. Orth. Surg.*, 1913, xi, 42.
- Hysterical scolioses. REINGER. *Berl. klin. Wchnschr.*, 1913, l, 1495.
- Apprentice's scoliosis. J. ELSNER. *Ztschr. f. orth. Chir.*, 1913, xxxii, 277.
- Congenital scoliosis traceable to the presence of a semi-vertebra. DUBREUIL-CHAMBARDEL. *Arch. gén. de chir.*, Par., 1913, vii, No. 7.
- The physiological treatment of pathological scoliosis by rotation. A. M. FORBES. *Brit. M. J.*, 1913, ii, 536.
- Modern treatment of scoliosis; how to treat its different forms. CALOT. *J. d. Prat., Par.*, 1913, xxvii, No. 34.
- The treatment of scoliosis. R. W. LOVETT. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [641]
- The treatment of lateral curvature of the spine by the Forbes method. Z. B. ADAMS. *Am. J. Orth. Surg.*, 1913, xi, 97. [641]
- The rotation treatment of scoliosis. A. M. FORBES. *Am. J. Orth. Surg.*, 1913, xi, 75.
- The treatment of scoliosis, especially by Abbott's method. F. BITTNER. *Prag. med. Wchnschr.*, 1913, xxxviii, 471.
- Abbott's technique in the treatment of scoliosis. KOSINSKI. *Przegl. lek.*, Kraków, 1913, lii, No. 13.
- The treatment of scoliosis after Abbott's method. P. VERSTRAETEN. *Belgique med.*, 1913, xx, 375.
- Treatment of scoliosis by Abbott's method. VAN NECK. *J. med. de Brux.*, 1913, xxiii, No. 30.
- Abbott's method of treating grave cases of scoliosis. DELCHEF. *Ann. de la Policlin. centr. de Brux.*, 1913, xiii, 161.
- Corrective jackets in the treatment of structural scoliosis with special reference to mensuration and record. A. H. FREIBERG. *Am. J. Orth. Surg.*, 1913, xi, 29.
- An introduction to the symposium on lateral curvature. A. G. COOK. *Am. J. Orth. Surg.*, 1913, xi, 1.
- Movements or positions of the normal spine and their relations to lateral curvature. E. G. ABBOTT. *Am. J. Orth. Surg.*, 1913, xi, 13.
- A consideration of the correction of the fixed types of lateral curvature, complicated by visceral derangements, especially those of the cardiac variety, with a slight modification of Abbott's method. R. O. REISENBACH. *Am. J. Orth. Surg.*, 1913, xi, 46.
- The forcible correction (Abbott's method) of roto-lateral curvature of the spine: a preliminary report. WALTER F. STERN. *Ohio St. M. J.*, 1913, ix, 275.
- A case of cervical spondylitis cured by heliotherapy. KIENAST and FRANKFURTER. *Wien. med. Wchnschr.*, 1913, lxii, No. 35.
- The treatment of spondylitis. A. HENLE. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte*, 1912, Part 2, 192.
- What to do after corrective jackets are removed. E. H. BRADFORD. *Am. J. Orth. Surg.*, 1913, xi, 63.
- A case of acute gonorrhoeal spondylarthritis. HEINRICH SANDER. *München. med. Wchnschr.*, 1913, lx, 1830.
- Transplantation of a part of the tibia in the treatment of Pott's disease. GUILLLOT. *Arch. med.-chir. de Normandie*, 1913, iv, No. 7.
- Anomalies of the sacro-lumbar articulation. E. S. HATCH. *N. Orl. M. & S. J.*, 1913, lxvi, 119.
- The treatment of chronic progressive diseases of the spinal cord by X-rays with an account of two cases. FRANCIS HERNAMAN-JOHNSON. *Brit. M. J.*, 1913, ii, 299.
- The treatment of spondylitic paralysis. P. BADE. *München. med. Wchnschr.*, 1913, lx, 1432. [641]
- Late epidermitization of myelomeningoceles. M. R. BONSMANN. *Virchow's Arch. f. path. Anat.*, etc., 1913, cxxiii, 131.

SURGERY OF THE NERVOUS SYSTEM

- New facts in regard to the nature of sciatica and new methods for the operative treatment of the disease. A. STOFFEL. *München. med. Wchnschr.*, 1913, lx, 1365. [642]
- Some cases of sciatica cured by the injection of strychnine. RETIVOFF. *Vrach. Gaz.*, St. Petersburg., 1913, xx, No. 32.
- Treatment of sciatica. SCHURIG. *München. med. Wchnschr.*, 1913, lx, No. 32.
- Gliomatous neuro-epitheliomata in the gluteal region. C. KOBER. *Ztschr. f. d. ges. Neurol. u. Psychiatr.*, 1913, xvii, 500.
- Traumatic bilateral external rectus paralysis with transient paresis of the left facial nerve. E. A. SHUMWAY. *Med. Rec.*, 1913, lxxxiv, 340.
- The operative treatment of traumatic paralysis of peripheral nerves. LUXENBOURG. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, Nos. 5-6.
- Treatment of neuralgia of the brachial plexus with Kulenkampff's anaesthesia. M. TÖBBEN. *München. med. Wchnschr.*, 1913, lx, 1883.
- Stöffel's operation. KÖLLIKER. *Zentralbl. f. Chir.*, 1913, xl, 1372.

DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

Treatment of burns from heliotherapy. AIMS. Gaz. d. Hôp., Par., 1913, lxxxvi, No. 88.

Treatment of burns from heliotherapy. MIRAMOND DE LA ROQUETTE. Gaz. d. Hôp., Par., 1913, lxxxvi, No. 96.

Treatment of burns by amidoazotoluol. BERLATZKY. Pract. Vrach, St. Petersburg., 1913, xii, No. 31.

Treatment of burns by Røvsing's method. IPSSEN. Hosp.-Tid., Kjøbenh., 1913, lvi, No. 31.

Burns treated after the method of Røvsing. O. WULFF. Hosp.-Tid., Kjøbenh., 1913, lv, 912.

A case of primary actinomycosis of the skin; incubation and latent period of actinomycosis. HOLLAND. Norsk. Mag. f. Lægevidn., Christiania, 1913, lxxiv, No. 8.

Neuroma cutis (dolorosum). M. L. HEIDINGSFELD. J. Am. M. Ass., 1913, lxi, 405.

Case of X-ray ulcer lasting eleven months with no tendency to healing; recovery after use of Zeller's paste. R. EBEN. Prag. med. Wchnschr., 1913, xxxviii, 498.

Treatment of varicose ulcers with simple adhesive

plaster bandages. WERTHEIMER. München. med. Wchnschr., 1913, lx, 1490.

Treatment of chronic ulcers of the leg, with special reference to symptomatology and diagnosis. E. ADAMS. Internat. J. Surg., 1913, xxvi, 288.

Free transplantation of fascia. J. SSOBOKEFF. Russk. Vrach, St. Petersburg., 1913, xii, 1096.

Free transplantation of fascia. HANS HERMANN SCHMID. Gynäk. Rundschau, 1913, vii, 429.

Experimental work in fascia transplantation. VALENTIN. Deutsche med. Wchnschr., 1913, xxxix, No. 31.

Experimental researches on homoioplastic transplantation of fascia. VALENTIN. Beitr. z. klin. Chir., 1913, lxxxv, No. 3.

Presents tatus of autoplasic free transplantation of fascia. KIRSCHNER. Beitr. z. klin. Chir., 1913, lxxxvi, No. 1.

Some modifications in the technique of Ollier-Thiersch grafts. HARDOUIN. Presse méd., Par., 1913, xxi, No. 68.

Skin grafting. WALTER R. PARKER. J. Mich. St. Med. Soc., 1913, xii, 414.

MISCELLANEOUS

Clinical Entities—Tumors, Ulcers, Abscesses, etc.

Diagnosis and pathology of the polyglandular system. KARL CSÉPAI. Deutsche Arch. f. klin. Med., 1913, cxi, 271.

Predisposition for tumors. M. GOLDZIEHER and E. ROSENTHAL. Ztschr. f. Krebsforsch., 1913, xiii, 321.

The positions of tumors in nature. F. DE QUERVAIN. Leipzig: Vogel, 1913. [642]

Biology, morphologic origin and cause of tumors of man and animals. KIMLA. Čas. lek. česk., 1913, lii, Nos. 24-25-26.

Worms and tumors. STEINHAUS. Policlin., Brussels, 1913, xxii, No. 14.

On the vulnerability of fast growing cell groups. M. JANSEN. Tr. Internat. Cong. Med., Lond., 1913, Aug. [642]

Spontaneous and artificial development of giant cells in vitro. G. C. WEIL. J. Pathol. and Bacteriol., 1913, xviii, No. 1. [643]

The association of tuberculosis and malignant growths. W. H. HARRIS. J. Med. Research, 1913, xxviii, 471. [643]

Experimental cancer. CONTAMIN. Presse méd., Par., 1913, xxi, No. 65.

The present status of the theory of cancer. CARL LEWIN. Naturwissenschaften, 1913, i, 585.

New procedures in diagnosis of cancer. FRÖHLICH. Liječ. Viestnik, Agram, xxxv, No. 6.

The Wassermann reaction in cancer. FREDERICK J. FOX. Med. Rec., 1913, lxxxiv, 283.

Arsenic cancer. NUTT, BEATTIE, and PYE-SMITH. Lancet, Lond., 1913, clxxxv, 282.

Experimental transplantation of cancer cells. STRAUCH. Berl. klin. Wchnschr., 1913, l, No. 31.

The local incidence of cancer in relation to fuel. C. E. GREEN. Edinb. M. J., 1913, xi, 144.

Disturbances in the albumin metabolism of cancerous subjects. PAUL SAXL. Wien. med. Wchnschr., 1913, lxi, 1730.

Investigations on capacity for meiostagmin reactions of the extracts of various types of ova to human cancer sera.

G. KELLING. Wien. klin. Wchnschr., 1913, xxvi, 1118.

Cause of carcinoma. E. FREUND. Tr. Internat. Cong. Med., Lond., 1913, Aug. [643]

Experimental data on mouse carcinoma. ERWIN ERHARDT. München. med. Wchnschr., 1913, lx, 1484.

Observations of a small endemic of mouse carcinoma. FR. HENKE. Ztschr. f. Krebsforsch., 1913, xiii, 303.

May carcinoma heal spontaneously? A. THEILHABER. Deutsche med. Wchnschr., 1913, xxxix, 1314.

The diagnostic value of increased content of neutral sulphur in carcinomatous patients. ALEX. EJEW. Russk. Vrach, St. Petersburg., 1913, xii, 319.

The disappearance of a round-celled sarcoma in the course of erysipelas. M. IHORI. Nippon-Geka-Gakkai-Zasshi, 1913, xiv, 65.

Generalized sarcomatosis. KLINGEBIEL. J. de Med. de Bordeaux, 1913, lxxxiv, No. 32.

The question of sarcomatous tumors in dogs. ANTISCHKOFF. Charkow. med. J., 1913, xv, 271.

Treatment of lymphosarcoma. FABIAN. München. med. Wchnschr., 1913, lx, No. 34.

The present status of our knowledge of malignant granuloma, with special consideration of its etiology. OSCAR MEYER. Folia hæmatol., 1913, xv, 205.

Erethistic granuloma. B. MAYHOFER. Osterr.-ungar. Vierteljahrschr. f. Zahnk., 1913, xxix, 169.

Chorio-epithelioma. C. B. KINYON. Internat. J. Surg., 1913, xxvi, 285.

Fibroma with twisted pedicle. S. POZZI and G. ROUHIER. Bull. et mém. Soc. anat. de Par., 1913, lxxxviii, 365.

Note on a case of symmetrical lipomatosis. MARTIN. Paris méd., Par., 1913, No. 36.

A case of botryomycosis in man. BOSELLINI. Clin. chir., Milano, 1913, xxi, No. 7.

Tropical abscess. ZUR WERTH. Deutsche mil.-Ärztl. Ztschr., 1913, xlii, 584.

Abscess due to streptothrix eppingeri (actinomyces asteroides) resembling a staphylococcal infection. W. BROUGHTON-ALCOCK. Brit. M. J., 1913, ii, 299.

Some unusual cases of hydatid disease. H. O'HARA. Med. Press & Circ., 1913, xcvi, 224.

The surgical cure of leprosy, based on a new theory of infection. E. S. GOODHUE. N. Y. M. J., 1913, xcvi, 266.

Case of artificial phlegmon. MILENOUCHKINE. Voenno-med. J., 1913, ccxxxvii, No. 4.

Report of a case of rabies. J. CHRIS O'DAY. Med. Sentinel, 1913, xxi, 1070.

Report of a case of rabies. CALVIN S. WHITE. Med. Sentinel, 1913, xxi, 1072.

Report of a case of rabies. LOUIS BUCK. Med. Sentinel, 1913, xxi, 1073.

Anthrax and its treatment. W. A. LIGNON. Ky. M. J., 1913, xi, 648.

The importance of pain and shock in operative mortality. LEIGH F. WATSON. J. Okla. St. Med. Ass., 1913, vi, 121.

The kinetic theory of shock and its prevention through anoci-association (shockless operation). G. W. CRILE. Cleveland M. J., 1913, xii, 513.

Morphological changes in tissue with changes in environment; replacement of surface epithelium of grafted tissue by adjacent epithelium. G. M. SMITH. J. Med. Research, 1913, xxviii, 423. [644]

Life of tissue outside of organism. PETROFF. Vrach. Gaz., St. Petersburg, 1913, xx, No. 30.

Cultivation of tissues outside the organism. GUIRGOLAFF. Vrach. Gaz., St. Petersburg, 1913, xx, Nos. 30-31.

Experiments with the cultivation of tissues. DRONOVSKY and POLEFF. Vrach. Gaz., St. Petersburg, 1913, xx, No. 29.

Spontaneous autoplasty by gradual extension of tissue, due to a position allowing immediate union. MORESTIN. Presse méd., Paris, 1913, xxi, No. 65.

Importance of free transplantation in modern surgery. H. KÜTTNER. Naturwissensch., 1913, i, 513. [645]

The clinical character and the treatment of railway injuries. W. W. SSISEMSKI. Russk. Vrach, St. Petersburg, 1913, xii, 24. [645]

Injuries by frost in weather above freezing temperature. A. KÖHLER. Zentralbl. f. Chir., 1913, xl, 1362.

Sera, Vaccines and Ferments

Study of the sources of error in the use of dialysis as a method of serologic research; effect of the blood content of the organ. ABDERHALDEN and WEIL. München. med. Wchnschr., 1913, lx, No. 30.

Serologic diagnosis of malignant disease and pregnancy by Abderhalden's method. GAMBAROFF. Novoev Med., St. Petersburg, 1913, vii, No. 14.

Diagnosis of cancer by Abderhalden's method. VOLTER. Russk. Vrach, St. Petersburg, 1913, xii, No. 32.

Value of the antitryptic reaction of the blood serum in the diagnosis of cancer. Vrach. Gaz., 1913, vi, Nos. 24-25.

The present status of serum therapy. W. B. JENNINGS. N. Y. M. J., 1913, xcvi, 420.

A case of serum therapeutics. M. RAM. Indian. M. Gaz., 1913, xlviii, 308.

Marmorek's anti-tuberculosis serum. REIMANN. Beitr. z. klin. Chir., 1913, lxxxv, No. 3.

Treatment of surgical tuberculosis with Marmorek's serum. PAVESIO. Rif. med., Naples, 1913, xxix, Nos. 33-34.

Tuberculin treatment. H. MACKENZIE. Lancet, Lond., 1913, clxxxv, 521.

Theses on tuberculin treatment. SAHLI. Lancet, Lond., 1913, clxxxv, 379. [646]

The anti-streptococci serum and electragol in the treatment of otogenous septic generalized infection. JOHANN LANG. Arch. f. Ohrenh., 1913, xc, 252.

Serum diagnosis of echinococcus. ZILBERG and CHMELITZKY. Charov. med. J., 1913, xvi, No. 1.

Anti-streptococcus serum. G. H. WEAVER. J. Am. M. Ass., 1913, lxi, 661.

A new diphtheria antitoxin. E. VON BEHRING. Deutsche med. Wchnschr., 1913, xxxix, 873. [646]

Alterations produced in complement-containing serums by introduction of lecithin. J. CRUICKSHANK and T. J. MACKIE. J. Pathol. & Bacteriol., 1913, xviii, No. 1. [646]

Clinical observations upon the influence of gonococcus vaccines in chronic gonorrhoeal arthritis. SSEMENOFF. Russk. Vrach, St. Petersburg, 1913, xii, 246.

Sterilized pus for the treatment of infections. V. B. NESFIELD. Indian. M. Gaz., 1913, xlviii, 307.

The local specific therapy of infections. SIMON FLEXNER. J. Am. M. Ass., 1913, lxi, 447.

A further contribution on the specificity of the protective ferments; the action of the blood serum of pregnant rabbits upon various organs. ABDERHALDEN and SCHIFF. München. med. Wchnschr., 1913, lx, 1923.

The reaction of the antigen antibodies and their employment in cancer. O. SCHMIDT. München. med. Wchnschr., 1913, lx, 1858.

Immunity by scientific bacterization versus natural immunization in self-limiting diseases of bacterial origin. ROEHR. N. Y. M. J., 1913, xcvi, 229.

A contribution to the relation between proteid cleavage products and anaphylaxis. AUER and VAN SLYKE. J. Exp. Med., 1913, xviii, 210. [647]

Blood

Studies in circulation. HUGO RIBBERT. Virchow's Arch. f. path. Anat., etc., 1913, cxliii, 17.

Studies in the circulation in man. VI. Observations on the blood flow in the hands (mainly) in anaemia. G. N. STEWART. J. Exp. Med., 1913, xviii, 113.

The value of the auscultatory method for the determination of blood pressure. W. E. RICHARD SCHOTTSTAEDT. Ohio St. M. J., 1913, ix, 373.

Blood pressure in infants, especially in gastro-enteritis. H. K. HILL. Arch. Pediatrics, 1913, xxx, 588.

Variations of the urea content of the blood, with a practical method for its determination. G. W. McCASKEY. Med. Rec., 1913, lxxxiv, 380.

Hard traumatic oedema. R. MORIAN. Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte, 1913, ii, part 2, 137.

The operative treatment of chronic oedema. W. BÜCKER. München. med. Wchnschr., 1913, lx, 1774.

Acute myelogenous leucemia or a peculiar sepsis due to streptococci. OSCAR GANS. Beitr. z. path. Anat. u. z. allg. Path., 1913, lvi, 441.

The surgical treatment of certain forms of icterus. A. W. MAYO-ROBSON. Wien. med. Wchnschr., 1913, lxiii, 2020.

Hæmorrhage in scarlet fever. KLIMENKO. Russk. Vrach, St. Petersburg, 1913, xii, 615.

Neurotic hæmorrhage. C. HART. Frankfurt. Ztschr. f. Pathol., 1913, xiii, 242.

Contributions to hæmophilia. H. HEYTER. Mitt. a. d. Hamburg, Staatskrankenanst., 1913, xiv, 9. [647]

Thrombosis of the splenic and portal veins. GOLDMAN. Deutsche med. Wchnschr., 1913, xxxix, No. 32.

Chronic mesenteric thrombosis. JOHN C. STANLEY. St. Paul M. J., 1913, xv, 381.

The treatment of thrombosis of the bulb of the jugular vein. BLUMENTHAL. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw., 1913, lxix, No. 1.

Thrombosis of the condyloid vessels. BEYER. Beitr. z. Anat., Physiol., Path. u. Therap. d. Ohres, d. Nase u. d. Halses, 1913, xi, Nos. 4-6.

Venous thrombosis of the right arm, called phlebitis from exertion. PELLOT. *Paris méd.*, 1913, No. 37.

Fat embolism. WILLIAM S. WALSH. *Hosp. Bull. Univ. Md.*, 1913, ix, 107.

Fat embolism of the large circulatory vessels and its causes. FROMBERG. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

Experimental researches on gas embolism following injection of air into the bladder. CARLO CANTINI. *Bull. d. sc. med.*, Bologna, 1913, lxxxiv, 491.

Direct transfusion of blood. H. FLÖRCKEN. *Verhandl. d. Gesellschaft. deutscher Naturforsch. u. Ärzte*, 1913, ii, part 2, 178.

A simplified method of direct blood transfusion with self-retaining tubes. L. H. LANDON. *J. Am. M. Ass.*, 1913, lxi, 490.

Blood and Lymph Vessels

Study of aneurisms of the small vessels; a case of traumatic aneurism of the radial artery from a subcutaneous lesion. DOBROVOLSKAIA. *Pract. Vrach, St. Petersburg*, 1913, xii, No. 29.

Aneurism of arteries of small caliber. DOBROVOLSKAIA. *Beitr. z. klin. Chir.*, 1913, lxxxv, No. 3.

A case of aneurism of the abdominal aorta associated with perforation of the stomach by a round ulcer. S. M. ZYPKIN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1145.

Varicose veins and accidents. LINIGER. *Monatschr. f. Unfallh. u. Invalidenwes.*, 1913, xx, 209.

A palpatory symptom of valvular insufficiency in beginning and invisible varices. E. HESSE. *Beitr. z. klin. Chir.*, 1913, lxxxv, 591. [647]

Operative treatment of varices. R. C. ÖHMANN. *Finska läk.-sällsk. handl.*, 1913, lv, 1.

Operative treatment of varicose veins after a very small incision. HOLFELDER. *Zentralbl. f. Chir.*, 1913, xl, No. 33.

Sapheno-femoral anastomosis in varicose veins. WEICHERT. *Berl. klin. Wchnschr.*, 1913, l, 1396.

The compression of the abdominal aorta. FELICE LA TORRE. *Ginec. minore*, 1913, vi, 65.

Obliteration of the superior vena cava. HEBARD. *Gaz. d. Hôp., Par.*, 1913, lxxxvi, No. 87.

Wieting's operation. NASSETI. *Clin. chir., Milano*, 1913, xxi, No. 7.

Vessel suture with measures for widening the lumen of the vessels, and its use in operations in blood vessels on the human subject. DOBROVOLSKAIA. *Russk. Vrach*, 1913, xii, 938.

Ruotte's operation. SIMON. *Berl. klin. Wchnschr.*, 1913, l, 1501.

Transplantation of blood vessels. CHARBONNEL. *Gaz. hebdom. d. sc. med. de Bord.*, 1913, xxxiv, No. 31.

The technique of intravenous administration. BERLIN. *Denver Med. Times*, 1913, xxxiii, 43.

Hodgkin's disease. LAGRIGNON. *J. de Med. et de Chir. de Montreal*, 1913, viii, No. 6.

On lymphogranulomatosis and its relation to other systematized lesions of the hæmopoetic system. H. GUGGENHEIM. *Thèse de doct., Par.*, 1913. [648]

Simultaneous occurrence of cancer and tuberculosis of an axillary lymph-gland. PIERRE NADAL. *Bull. et mém. Soc. anat. de Par.*, 1913, lxxxviii, 354.

A case of lymphangioma circumscriptum. PAUL E. BECHET. *J. Am. M. Ass.*, 1913, lxi, 333.

Injuries of the thoracic duct in operations in the left supraclavicular region. W. M. NASAROFF. *Arb. d. chir. Klin., Prof. W. A. Oppel, Med. Akad. z. St. Petersburg*, 1913, iv, 125.

An acid-fast bacillus from a case of ulcerated throat. C. SHEARMAN. *Australas. M. Gaz.*, 1913, xxxiv, 95.

Gas bacillus infection. D. GUTHRIE. *Penn. M. J.*, 1913, xvi, 863.

Bacterium lactis aerogenes causing fatal septicæmia. HIRSCHBRUCH and ZIEMANN. *Zentralbl. f. Bakteriolog. Parasitenk. u. Infektionskrankh.*, 1913, lxx, 281.

An unusual case of septicopyæmia. W. B. COFFEY, G. R. CARSON and W. T. CUMMINS. *N. Y. M. J.*, 1913, xcvi, 377.

A case of streptococcosis, with a survey of streptococcoses. W. E. BROTHURUS. *Duodecim.*, 1913, No. 6, 1.

Biology of the gonococcus; its importance in gynecology and obstetrics. CHIRCHOFF. *Novoe v med.*, St. Petersburg, 1913, Nos. 13-14.

Importation of cutaneous germs by the knife. ALFRED STEINEGGER. *Zentralbl. f. Chir.*, 1913, xl, 1033.

Surgical Therapeutics

Distribution and excretion of urotropine in the human body and its relation to the differential diagnosis of hydrocephalus, according to Ibrahim. W. USENER. *Ztschr. f. Kinderh.*, 1913, viii, 111.

Unfavorable effects of hexamethylenetetramin (urotropine). WILHELM CUNTZ. *München. med. Wchnschr.*, 1913, lx, 1656.

An experimental study of sodium bicarbonate and other allied salts in shock. SEELIG, TIERNEY and RODENBAUGH. *Am. J. M. Sc.*, 1913, cxlvi, 157.

Experimental tests of hormonal. L. SCHLAGINTWEIT. *Arch. Internat. de pharmacod. et de therap.*, 1913, xxiii, 77.

The effect of morphine on the circulation. E. ANDERES. *Arch. f. exp. Path. u. Pharmak.*, 1913, lxxii, 331.

Influence of raw paraffin oil on the growth of epithelium. FR. ESSLINGER. *Beitr. z. klin. Chir.*, 1913, lxxxv, 715.

Chemotherapeutic experiments upon cancerous subjects by the aid of selenium-iodine-methylene blue. A. BRAUNSTEIN. *Berl. klin. Wchnschr.*, 1913, l, 1102.

Injections of insoluble radium sulphate in inoperable cancers. LEDOUX-LEBARD. *Arch. d'électric. méd., Bordeaux*, 1913, xxi, No. 363.

The influence of copper upon the growth of mouse carcinoma. A. J. GELARIE. *Brit. M. J.*, 1913, ii, 213.

The intravenous employment of camphor. W. WEINTRAUD. *Deutsche med. Wchnschr.*, 1913, xxxix, 1352.

Some notes on a new guaiacol chlor-iodide compound in the treatment of various conditions. JOHN MABERLY. *Lancet, Lond.*, 1913, clxxxv, 282.

The present status of bismuth paste treatment of suppurative sinuses and empyema. EMIL G. BECK. *Tr. Internat. Cong. Med., Lond.*, 1913, Aug. [648]

Noviform in the treatment of wounds. SPECK. *München. med. Wchnschr.*, 1913, lx, No. 34.

Treatment of wounds with mastisol and "mechanical asepsis" by Dettingen's method. HANASIEWICZ. *Wien. med. Wchnschr.*, 1913, lxii, No. 35.

Some dangers from hydrate of chloral. T. D. CROTHERS. *Med. Council*, 1913, xviii, 290.

The anatomical and clinical relations of the sphenoidal sinus to the cavernous sinus and the nerve stems of the oculomotor, trochlear, trigeminal, abducens and vidianus nerves. GREENFIELD SLUDER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, 369.

Electrology

The physical principles involved in X-ray dosage. CHRISTEN. *Strahlentherapie*, 1913, iii, 162.

The correct reading of color changes in X-ray dosage. G. BUCKY. *Strahlentherapie*, 1913, iii, 172.

The radiochromoscope; an instrument for measuring exact X-ray dosage. T. NOGIER. *Strahlentherapie*, 1913, iii, 165.

Secondary rays originating in the animal tissues. S. RUSS. *Strahlentherapie*, 1913, iii, 308.

The radiograph in relation to the diagnosis and treatment of gastric and intestinal lesions. H. P. COLE. *Atlanta J.-Rec. Med.*, 1913, lx, 197.

The early use of the röntgen ray in the study of the alimentary canal. W. B. CANNON. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [648]

Diagnostic mistakes occasioned by faulty X-ray pictures. E. B. H. VAN LIER. *Ztschr. f. Röntgenk.*, 1913, xv, 205.

The statistics of the X-ray examination for stone in the urinary tract. C. T. HOLLAND. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [649]

Stereo-röntgenographic determination of the position of foreign bodies. VON HOLST. *Russk. Vrach*, St. Petersburg, 1913, xii, 800.

New method of external application of radium. VALLET. *Presse méd.*, Par., 1913, xxi, No. 69.

Effect of radio-active substances and radiations upon normal and pathological tissues. W. S. LAZARUS-BARLOW. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [649]

Modern röntgen therapy. MEYER. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 31.

Some remarks on radiotherapy. H. W. REYNOLDS. *So. African M. Rec.*, 1913, xi, 347.

Progress of radium-therapy. SAUBERMANN. *Arch. Röntg. Ray*, 1913, xviii, 98. [649]

Theoretical and practical contributions on röntgenotherapy. ERNST HOLZBACH. *Strahlentherapie*, 1913, iii, 279.

Röntgenotherapy in measured massive doses. LANGE. *J. Am. M. Ass.*, 1913, lxi, 556. [650]

Theory and practice of radium and mesothorium treatment. A. STICKER. *Strahlentherapie*, 1913, iii, 1.

Radium in malignant disease. R. ABBE. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [650]

Treatment by radiotherapy of some cases of sarcoma and malignant tumors diagnosed clinically. LABEAU. *Gaz. hebdom. d. sc. méd. de Bordeaux*, 1913, xxxiv, No. 34.

Experiences with radium treatment of malignant tumors. ALFRED EXNER. *Wien. klin. Wchnschr.*, 1913, xxvi, 1203.

X-ray treatment of malignant tumors and its combination with other methods of treatment. CHRISTOPH MÜLLER. *Strahlentherapie*, 1913, iii, 177.

The combined chemo- and röntgenotherapy of malignant tumors. LUDWIG SEELIGMANN. *Deutsche med. Wchnschr.*, 1913, xxxix, 1310.

The influence of röntgen rays upon malignant tumors. MAX LEVY-DORN. *Strahlentherapie*, 1913, iii, 210.

Radiotherapeutic treatment of tumors. S. LÖWENTHAL. *Berl. klin. Wchnschr.*, 1913, l, 1519.

The healing process of osteosarcoma under the influence of the röntgen rays. GEORGE E. PFAHLER. *J. Am. M. Ass.*, lxi, 547.

Radiotherapy of carcinomata. PAUL LAZARUS. *Berl. klin. Wchnschr.*, 1913, l, 1304.

What can be done in cancer with röntgen rays? WM. ALLEN PUSEY. *J. Am. M. Ass.*, 1913, lxi, 552. [650]

Treatment of cancer by radium. BAYET. *J. med. de Brux.*, 1913, xxiii, No. 32.

Mesothorium in the treatment of cancer in Germany. GUNSETT. *Arch. d'électric. méd.*, Bordeaux, 1913, xxi, No. 363.

Technique of radiotherapy of cancer. BUMM and VOIGTS. *München med. Wchnschr.*, 1913, lx, No. 31.

Effect of radiotherapy and intravenous chemotherapy on inoperable cancer of the uterus. SEELIGMANN. *München. med. Wchnschr.*, 1913, lx, No. 34.

Effect of radiotherapy and intravenous chemotherapy on inoperable uterine cancer. KLOTZ. *München. med. Wchnschr.*, 1913, lx, No. 31.

Deep radiotherapy. HEIMANN. *Strahlentherapie*, 1913, iii, No. 2.

Röntgen technique of deep therapy. A. F. HOLDING. *Tr. Röntg. Ray Soc.*, Boston, 1913, Oct. [651]

Results obtained with deep radiotherapy. WEITZEL. *Strahlentherapie*, 1913, iii, No. 2.

Results of treatment with X-rays. PETERSEN. *Zentralbl. f. Chir.*, 1913, xl, 1402.

Late injury of the skin and internal organs following X-ray treatment. H. E. SCHMIDT. *Deutsche med. Wchnschr.*, 1913, xxxix, 1553.

Explanation of death caused by X-rays. P. FRAENCKEL and H. MARX. *Arch. f. Kriminal-Anthropol. u. Kriminalist.*, 1913, liv, 103.

Accidents from electricity. F. FRISCHL. *Wien. klin. Wchnschr.*, 1913, xxvi, 1430.

Clinical contributions on injuries by electricity. GOTTLIEB MALÝ. *Deutsche Ztschr. f. Nervenhe.*, 1913, xlv, 366.

Heliotherapy. AIMES. *Montpellier med.*, 1913, xxxvii, No. 23.

Heliotherapy. GUGE. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, Nos. 5-6.

Remarks on the question of heliotherapeutics. G. A. GUYE. *Deutsche Ztschr. f. Chir.*, 1913, cxxiii, 608.

Military and Naval Surgery

Military surgery. GUSTAVUS M. BLECH. *Am. J. Surg.*, 1913, xxvii, 309.

The Red Cross; notes on war surgery. SLAJMER. *Srpski arh. za celok. lek.*, Beograd, 1913, xix, No. 233.

The Red Cross; notes on war surgery. BOUDISSAV-LEVITCH. *Srpski arh. za celok. lek.*, Beograd, 1913, xix, No. 234.

The limits of conservative treatment in military surgery. KLAPP. *Med. Klin.*, Berl., 1913, ix, 1326.

Surgical observations at the military hospital at Batoum. FROLOFF. *Voenno-med. J.*, St. Petersburg, 1913, ccxxxvii, No. 4.

Periostitis from over-exertion and spontaneous fractures in the army. W. WOLF. *Deutsche mil.-ärztl. Ztschr.*, 1913, xlii, 548. [651]

Experiences with the mastisol bandage in the Servian-Turkish war. STIERLIN and VISCHER. *Cor.-Bl. f. schweiz. Ärzte*, 1913, xliii, 688. [651]

GYNECOLOGY

Uterus

Surgical anatomy of the pelvic uterus in the female of the human species. E. PAPIN. Arch. mens. d'obst. et de gynec., 1913, ii, 1.

Are the uterus and its adnexa suspended or supported? JACOBS. Gynecologie, Par., 1913, xvii, No. 6.

The biological and biochemical function of the endometrium. RIDDLE GOFFE. Internat. Cong. Med., Lond., 1913, Aug.

Carcinoma of the cervix of the uterus. KELLY and NEEL. Bull. Johns Hopkins Hosp., 1913, xxiv, 231. [652]

Cure of carcinoma as a result of bioscopic test curettement. STRATZ. Zentralbl. f. gynec., 1913, xxxvii, No. 31.

Carcinoma of the uterus treated by the Percy cautery method, with autopsy. F. M. LOOMIS. Physician & Surg., 1913, xxxv, 350.

Effect of mesothorium and X-rays on carcinoma of the uterus and ovaries. HAENDLY. Strahlentherapie, 1913, iii, No. 2.

Results obtained with X-ray treatment of carcinoma of the uterus, ovaries and mammæ. G. KLEIN. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [652]

The histology of cancer of the uterus. LIEGNER. Beitr. z. Geburtsh. u. Gynäk., 1913, xviii, No. 3.

Cystoscopic examinations in cancer of the cervix of the uterus. HARTMANN. Paris méd., 1913, No. 22, 523.

The results of mesothorium treatment in cancers. A. PINKUSS. Berl. klin. Wchnschr., 1913, l, 1105. [652]

Comparative study of methods of operation for cancer of the uterus and their results. OTT. Russk. Vrach, St. Petersburg, 1913, xii, No. 32.

The treatment of uterine cancer in its very first stages. NEUWIRTH. Zentralbl. f. Gynäk., 1913, xxxvii, No. 33.

Malignant degeneration of chorionic villi extending into the blood circulation; a contribution to malignant chorio-epithelioma. NAGY. Arch. f. Gynäk., 1913, c, No. 2.

Endothelioma of the uterus of traumatic origin, causing complete rotation of the organ on its transverse axis. CURTIS and VANVERTS. L'écho med. du Nord, Lille, 1913, xvii, No. 32.

A rare case of total sarcomatosis of the uterus. CONSTANTINI. Clin. chir., Milano, 1913, xxi, No. 7.

The question of cystic degeneration of uterine myomata. E. GUNAKOFF. Ztschr. f. Geburtsh. u. Gynäk., 1913, xxviii, 715. [653]

Many-celled myomata and myosarcomata of the uterus. RAAB. Arch. f. Gynäk., 1913, c, No. 2.

Experiences with the X-ray in the treatment of hæmorrhagic metropathies and myomas. LANGE. München. med. Wchnschr., 1913, lx, 1740. [653]

Axial torsion of the myomatous uterus. POTH. Zentralbl. f. Gynäk., 1913, xxxvii, No. 31.

Mesothorium in the treatment of hæmorrhagic metropathies and of myomata. A. PINKUSS. Deutsche med. Wchnschr., 1913, xxxix, 1041. [653]

The histopathology of the Fallopian tube in uterine fibromyomata. MAUGERI. Ann. de ostet. e ginec., Milano, 1913, xxxv, No. 7.

Interstitial uterine fibroma and cancer of the cervix. JACOBS. Bull. Soc. belge de gynec. et d'obst., 1913, xxiv, 279.

Hæmorrhages of the menopause and cancer. ANDRÉ CROTTI. Ohio St. M. J., 1913, ix, 370.

Uterine sclerosis and its connection with uterine hæmorrhages. F. W. BUKOJEMSKY. Arch. f. Gynäk., 1913, xcix, 463. [654]

Chronic parametritis and displacements. ZIEGENSPECK. Deutsche Gesellsch. f. Gynäk., Halle, 1913, May. [654]

The operative treatment of chronic inflammatory infiltrations of the pelvic basis, with special consideration of posterior parametritis. FALGOWSKI. Gynäk. Rundschau, 1913, vii, No. 15.

Mud and mineral baths during menstruation. A. A. RUSSAKOVA-SWOWITSCH. Ztschr. f. Geburtsh. u. Gynäk., 1913, xxviii, 783. [654]

Partial muscular atrophy in myopathies. ROSE. Semaine méd., Par., 1913, xxxiii, No. 33.

Leukoplakia uteri. THOMPSON F. SWEENEY. Am. J. Obst., N. Y., 1913, lxviii, 236. [654]

Reflex vomiting and uterine displacement a clinical study. T. M. WEST. Va. M. Semi-Month., 1913, xviii, 226.

Associated occurrence of uterovaginal prolapse; hysterocolopexy and its indications. LENORMANT. Gynecologie, Par., 1913, xvii, No. 6.

Exohysteropexy or suspension of the uterus in hammock form as a treatment of prolapse of the genitalia. DELASSUS. Semaine gynec., Par., 1913, 245.

Elimination of the danger of peritonitis in the operative treatment of rupture of the uterus and of perforating injuries of the uterus. WALTER SIGWART. Arch. f. Gynäk., 1913, c, 196.

The indications for and technique of defundatio uteri. A. RIECK. Frauenarzt, 1913, xxviii, 242. [654]

Adnexal and Periuterine Conditions

Giant ovary. S. POZZI and ROUHIER. Bull. et mém. Soc. anat. de Par., 1913, lxxxviii, 369.

Internal secretion of ovaries and its relation to the lymphocytes. F. HEINMANN. Ztschr. f. Geburtsh. u. Gynäk., 1913, lxxiii, 538. [655]

A clinical and anatomical pathological contribution to the study of hæmorrhages of ovarian origin. BERTINO. Ginecologia, Milano, 1913, x, No. 4.

Sarcoma developing within a teratoma of the ovary with metastases in the great omentum. H. KLOSS. Zentralbl. f. allg. Pathol. u. pathol. Anat., 1913, xxiv, 482. [655]

Ovarian teratomata. CHARLES STANLEY WHITE. Am. J. Obst., N. Y., 1913, lxviii, 236.

Carcinomatous degeneration of ovarian cysts. ULESKO-STROGONOFF. Russk. Vrach, St. Petersburg, 1913, xii, 604. [655]

Suppurative dermoid cyst of the left ovary as a complication of puerperium. BERTINO. Ginecologia, Milano, 1913, x, No. 5.

The disadvantages of the conservative surgery of ovarian cysts. SILHOL. Arch. mens. d'obst. et de gynec., 1913, ii, 338.

Experimentally obtained results of radio-active treatment of the ovaries. LACASSAGNE. Ann. de gynec. et d'obst., Par., 1913, x, Aug.

The removal of blood from the peritoneal cavity following rupture of the tube. BAISCH. Monatschr. f. Geburtsh. u. Gynäk., 1913, xxxvii, 714. [655]

Chorio-epithelioma of the tube. ALPHONSE HUGUIER and LORRAIN. Bull. et mém. Soc. anat. de Par., 1913, lxxxviii, 343.

Three cases of tuberculosis of the adnexa. DE ROUVILLE. *Montpellier med.*, 1913, xxxvii, No. 30.

The conservative surgical therapeutic procedure in the treatment of tuberculosis of the adnexa. PATEL and OLIVIER. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xxi, No. 1.

Affections of the adnexa; inflammations and tubal pregnancy. W. HANNES. *Ergebn. d. Chir. u. Orthop.*, 1913, vi, 609. [655]

Fibromyomata of the broad ligament. ALFIERI. *Ginecologia*, Milano, 1913, x, No. 3.

One hundred cases of ventrofixion of the round ligaments after my own method and 100 operations after the method of Alexander-Adams with sutures buried as a matter of principle and without a single recurrence. RISSMANN. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, No. 3.

External Genitalia

Vaginal injections. PAUL DALCHÉ. *Rev. prat. d. mal. d. organ. génito-urin.*, 1913, x, 275.

Vaginal bacteria and endogenous infection. O. BONDY. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 604. [656]

A case of primary cancer of the vagina associated with leucoplasia. LÖHNBERG. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, No. 3.

Cysts of the vagina. BATALINE. *Sibirsk. Vrach. Gaz.*, 1913, vi, No. 21.

Radical treatment of vaginal hydrocele by the inguinal path of access. GOMAIN. *Lyon chir.*, 1913, x, No. 2.

Vaccine therapy in the treatment of vulvo-vaginitis. W. R. JACK. *Glasgow M. J.*, 1913, lxxx, 84. [656]

The iodine treatment of gonorrhœa in the female. O. HOFMANN. *Interst. M. J.*, 1913, xx, 733. [657]

Prolapse of the mucous membrane of the urethra in girls (intussusceptive mucosæ urethræ). M. G. KISCHNIR. *Russk. Vrach. St. Petersburg.*, 1913, xii, 1038.

Lacerations of the perineum: prevention and treatment. H. E. PRICE. *Ellingwood's Therapeutist*, 1913, vii, 267.

Miscellaneous

Address in gynecology. THOMAS S. CULLEN. *Canad. M. Ass. J.*, 1913, iii, 658. [657]

Points and pitfalls in gynecological diagnosis. JOHN BENJAMIN HELLER. *Practitioner*, Lond., 1913, xci, 157.

Present status of radiotherapy in gynecology. ENGELHORN. *Strahlentherapie*, 1913, iii, No. 2.

Röntgenotherapy in gynecology. GEORGE E. PFAHLER. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [657]

Röntgenotherapy in gynecology. KIRSTEIN. *Gynäk. Rundschau*, 1913, vii, No. 15.

Mesothorium in gynecology. SIGWART and HÄNDLY. *Med. Klin.*, Berl., 1913, ix, No. 33.

Technique of gynecological mesothorium treatment. GAUSS. *Strahlentherapie*, 1913, iii, No. 2.

Mesothorium treatment of genital cancer. JUNG. *Strahlentherapie*, 1913, iii, No. 2.

Effect of röntgen and mesothorium rays on tumors of the genital organs. KROEMER. *Strahlentherapie*, 1913, iii, No. 2.

The cystoscopic diagnosis of a ureteral calculus and its removal by the vaginal route. F. HEINSIUS. *Ztsch. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 441. [657]

A case of acute retention of the urine in gynatresia. H. LOHNSTEIN. *Ztschr. f. Urol.*, 1913, vii, 630.

Congenital anomalies in the urinary apparatus in woman. M. PIETKIEWICZ. *Przegl. i ginec.*, Washawa, 1913, viii, 343.

External female pseudohermaphroditism. KÜSTNER. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, No. 3.

The modern diagnosis and treatment of gynecological and obstetrical patients with syphilis. J. B. SQUIER. *N. Y. M. J.*, 1913, xcvi, 357. [658]

Bacteriological control of sepsis during gynecological laparotomies. W. SIGWART. *Arch. f. Gynäk.*, 1913, xcix, 284. [658]

Relations between affections of the veins and the female genitalia. RUD. TH. JASCHKE. *Zentralbl. f. d. Grenzgeb. d. Med. u. Chir.*, 1913, xvii, 115.

Relations of inflammatory conditions of the colon to the female genitalia and to functional neuroses. E. OPITZ. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 362.

The surgical treatment of pelvic thrombosis of septic origin. HENRY JELLETT. *Surg., Gynec. & Obst.*, 1913, xvii, 147. [658]

Associated occurrence of tubercular and neoplastic genitalia. PAMPININI. *Ann. di ostet. e ginec.*, Milano, 1913, xxxv, No. 7.

Basedow's disease and genital organs. LAMPÉ. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [659]

The changes in the blood during menstruation. V. CANTONI. *Arch. f. Gynäk.*, 1913, xcix, 541.

Precocious menstruation. GENGENBACH. *J. Am. M. Ass.*, 1913, lxi, 563. [659]

The demonstration of menstrual blood by the glyco-geniodin reaction. F. DYRENFURTH. *Ztschr. f. Med.-Beamte*, Berl., 1913, xxvi, 452.

Passionate phenomena; hyperemia and hæmorrhages of the female genitalia following subcutaneous injection of ovarian or placental extract. BERNARD ASCHNER. *Arch. f. Gynäk.*, 1913, xcix, 534.

The drop method for the injection of saline solutions into the rectum in gynecology. KOUSKOVA-OUSSOVA. *J. akush. i jensk. boliez.*, St. Petersburg, 1913, xxviii, Nos. 7-8.

OBSTETRICS

Pregnancy and Its Complications

The elastic area in the isthmus of the uterus as a positive and early sign of uterine pregnancy. LOUIS J. LADINSKI. *Am. J. Obst., N. Y.*, 1913, lxviii, 210. [660]

The determination of the duration of pregnancy on the basis of histological placental findings and the possible practical utility of these findings. A reply to Peters'

article of the same title. J. SCHOTTLENDER. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 806. [660]

Nitrogen metabolism during pregnancy. S. A. GAMMELTOFT. *Skandinav. Arch. f. Physiol.*, 1913, xxviii, 325. [660]

The cholesterol content of the bile during pregnancy. J. W. MCNEE. *Deutsche med. Wchnschr.*, 1913, xxxix, 994. [660]

A case of partial retroflexion of the pregnant uterus. FONYO. *Zentralbl. f. Gynäk.*, 1913, xxxvii, No. 34.

Uterine myomata complicating pregnancy. W. T. CHENHALL. *Australas. M. Gaz.*, 1913, xxxiv, 122.

Uterine fibroids and pregnancy. W. TRETOWAN. *Australas. M. Gaz.*, 1913, xxxiv, 119.

The pernicious vomiting of pregnancy. R. A. KINGMAN. *Am. Med.*, 1913, viii, 519. [660]

Mitral stenosis complicating pregnancy. S. E. MUNSON. *Illinois M. J.*, 1913, xxiv, 114.

Patent ductus arteriosus; report of a case complicated by pregnancy. LEO BROOKS ROSENTHAL. *Am. J. Obst.*, N. Y., 1913, lxviii, 252. [661]

Frequency and significance of cardiac disease during pregnancy. PANKOW. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [661]

Addison's disease and pregnancy. VOGT. *München. med. Wchnschr.*, 1913, lx, No. 33.

Cystic kidneys and pregnancy. F. HEINSIUS. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 429.

Pyelonephritis in pregnancy. CHAUFFARD. *J. d. Prat.*, Par., 1913, xxvii, No. 34.

Hæmorrhages in pregnancy. DAVERNE. *Année méd.*, Caen., 1913, xxxviii, 273.

The surgical treatment of bacillus coli communis infection complicating pregnancy with report of cases. E. P. DAVIS. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [662]

Ectopic pregnancy in the ovarian ligament; a contribution to the anatomical diagnosis of advanced cases. E. ENGELKING. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 740. [662]

Clinical data on extra-uterine pregnancy. CHOMIAKOVA-BOUSLOVA. *J. akush. i jensk. boliez.*, St. Petersburg, 1913, xxviii, Nos. 7-8.

Extra-uterine pregnancy. R. C. FRAVEL. *Va. M. Semi-Month.*, 1913, xviii, 220.

Treatment of extra-uterine gravidity. E. FALK. *Arch. f. Gynäk.*, 1913, xcix, 638.

Tubal or extra-uterine pregnancy. J. HUGH CARTER. *South. M. J.*, 1913, vi, 521.

Tubal pregnancy. HARTMANN. *Nord. med. Arch.*, Stockholm, 1913, xlvi (Chir. F. 1).

Diagnosis of pregnancy developed in rudimentary horn of the uterus. BRUNO. *J. akush. i jensk. boliez.*, St. Petersburg, 1913, xxviii, Nos. 7-8.

The diagnosis and treatment of eclampsia. G. W. KOSMAK. *Merck's Arch.*, 1913, xv, 243.

The indications for abdominal Cæsarean section. REUBEN PETERSON. *Surg., Gynec. & Obst.*, 1913, xvii, 198. [662]

Statistics on supra-symphyseal transperitoneal Cæsarean section. G. RONCAGLIA. *Ann. di ostet. e ginec.*, 1913, xxxv, 206.

The present technique of abdominal Cæsarean section in France. JEANNIN. *Presse méd.*, Par., 1913, xxi, No. 65.

Cæsarean section with hysterectomy in cases of positive infection. J. F. BALDWIN. *N. Y. M. J.*, 1913, xcvi, 372. [662]

Two unusual cases of ectopic pregnancy, one a triplet. J. F. BALDWIN. *J. Am. M. Ass.*, 1913, lxi, 392. [663]

Early miscarriage. WALLICH. *Rev. de gynéc. et de chir. abdom.*, Par., 1913, xxi, No. 1.

Bacteriological examination in the treatment of abortion. A. SCHERER. *Orvosi hetil.*, Budapest, 1913, lvii, 337.

The artificial interruption of pregnancy and sterilization in one session by the abdominal route. H. SELHEIM. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, 166.

Labor and Its Complications

Present views on the management of normal labor. CHARLES F. DENNY. *St. Paul M. J.*, 1913, xv, 381.

Difficult labor. H. C. CLARK. *Ky. M. J.*, 1913, xi, 740.

Prolonged precipitate parturition due to disengagement of the disproportionate head. A. E. GALLANT. *Med. Rec.*, 1913, lxxxiv, 337. [663]

A case of complete spontaneous rupture of the uterus at the moment of delivery. PETROPAVLOVSKY. *Vrach. Gaz.*, St. Petersburg, 1913, xx, No. 30.

Uterine rupture following the use of pituglandol. ESPENT. *München. med. Wchnschr.*, 1913, No. 32.

Delivery in total paralysis of the body. M. BOGDANOWITSCH. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 809. [663]

Subcutaneous symphyseotomy. DE BOVIS. *Semaine méd.*, Par., 1913, xxxiii, No. 33.

Puerperium and Its Complications

A case of puerperal tetanus with recovery. WERNER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 671. [664]

A case of puerperal sepsis cured by operation. BRIX. *München. med. Wchnschr.*, 1913, lx, 1325.

An unusual case of extension necrosis of the puerperal uterus. A. VON REDING. *Cor.-Bl. f. Schweiz. Ärzte.*, 1913, xliii, 651.

Emptying the uterus as a method of treatment of puerperal eclampsia. REUBEN PETERSON. *Am. J. Obst.*, N. Y., 1913, lxviii, 201. [664]

The medical versus the surgical treatment of puerperal eclampsia. E. G. ZINKE. *N. Y. St. J. M.*, 1913, xiii, 422. [664]

On the management of the interior of the uterus in post-abortal and post-partial infection. J. POLAK. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [664]

Peroneus paresis post-partum. C. STAUDE. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 611. [665]

Miscellaneous

Beriberi in infancy. Poisoning of the nursing by the milk of a mother affected with beriberi. Based on the work of American physicians in the Philippines. KRONECKER. *Allg. med. Zentralztg.*, 1913, lxxxii, 404.

A study of stillbirths. L. W. THOMAS. *N. Y. M. J.*, 1913, xcvi, 413.

Fœtal hormones. B. WOLFF. *Habilitationschrift*, Rostock, 1913. [665]

The use of fœtal serum to cause the onset of labor. A. F. ROUGHY. *M. S. J.*, Calcutta, 1913, x, 109. [666]

Intra-uterine rupture of the fœtal liver. DIETRICH. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 868. [666]

Organic specificity of the pregnancy ferments in relation to the placenta. G. PLOTKIN. *München. med. Wchnschr.*, 1913, lx, 1942.

On some phosphatids derived from the human placenta. C. SAKAKI. *Biochem. Ztschr.*, 1913, liv, 1.

Diagnosis of retro-placental hæmorrhage. BONNET-LABORDERIE. *J. d. sc. méd. de Lille*, 1913, xxxvi, No. 30.

Care of the umbilical stump. FRED L. ADAIR. *J. Am. M. Ass.*, 1913, lxi, 537. [666]

Sacral anæsthesia. S. SCHLIMPERT. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May.

The relations between menstruation and nursing the child. D. TIBONE. *Rassegna d'ostet. e ginec.*, Napoli, 1913, xxii, 129.

The care of the nipple during pregnancy. KRÜGER. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 867. [667]

The clinical significance of the urine in pregnancy. HAROLD C. BAILEY. *Am. J. Obst., N. Y.*, 1913, lxviii, 252 [667]

The influence of the thyroid glands on pregnancy and lactation. W. M. THOMPSON. *Surg., Gynec. & Obst.*, 1913, xvii, 225. [667]

The biological diagnosis of pregnancy. POLANO. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxvii, 857. [667]

The serodiagnosis of pregnancy. HENRY SCHWARZ. *J. Am. M. Ass.*, 1913, lxi, 484. [667]

Can Abderhalden's dialization method be used in differential diagnosis? E. SCHIFF. *Deutsche Gesellsch. f. Gynäk.*, Halle, 1913, May. [667]

The applicability of Abderhalden's reaction for the serum diagnosis of pregnancy. F. MACCABRUNI. *München. med. Wchnschr.*, 1913, lx, 1259. [668]

Diagnostic value of Abderhalden's serum reaction. BRUCK. *München. med. Wchnschr.*, 1913, No. 32. [668]

Clinical observations on Abderhalden's reaction. JAWORSKI. *Gynäk. Rundschau*, 1913, vii, No. 15. [668]

The therapeutic use of the normal serum of pregnancy. A. MAYER. *München. med. Wchnschr.*, 1913, lx, 1411. [668]

Pituitrin in obstetrics. JENNINGS C. LITZENBERG. *St. Paul M. J.*, 1913, xv, 399. [668]

A case of rupture of the uterus following the administration of pituitrin. E. HERZ. *Zentralbl. f. Gynäk.*, 1913, xxxvii, 720. [668]

Experiences with pituglandol in obstetrics. A. FUCHS. *Ztschr. f. Geburtsh. u. Gynäk.*, 1913, lxxiii, 517. [668]

The modification of the hæmoglobin catalyzer during pregnancy. ERNST ENGELHORN. *München. med. Wchnschr.*, 1913, lx, 1195. [668]

The relation of the cervix to sterility and pregnancy. M. F. GOLDBERGER. *Internat. J. Surg.*, 1913, xxvi, 269. [668]

Gonorrhœa in relation to pregnancy and the puerperal period. A. S. JAEGER. *J. Indiana St. M. Ass.*, 1913, vi, 353. [668]

Retrospect of 510 obstetrical cases. J. B. CRAMMER. *South. M. J.*, 1913, vi, 543. [668]

Experiences in a private obstetrical practice extending over 25 years. HENRY J. KREUTZMANN. *Monatschr. f. Geburtsh. u. Gynäk.*, 1913, xxxviii, 260. [668]

A review of obstetrical literature of the third quarter of the year 1912. K. FRANKENSTEIN. *Fortschr. d. Med.*, 1913, xxxi, 958. [668]

Radical and conservative management of some obstetric problems. ROSCOE D. McMILLAN. *Hosp. Bull. Univ. Md.*, 1913, ix, 100. [668]

GENITO-URINARY SURGERY

Kidney and Ureter

The pathology of the suprarenal capsules. KONRAD HELLY. *München. med. Wchnschr.*, 1913, lx, 1811. [669]

Associated occurrence of heterotopic bone marrow and aberrant tissue of the suprarenal capsule. ALDO BOLAFFI. *Arch. per le sc. med., Torino.*, 1913, xxxvii, 132. [669]

Tumors of the medulla of the suprarenal glands, particularly sympathetic neuroblastoma. HERXHEIMER. *Beitr. z. path. Anat. u. z. allg. Path.*, 1913, lvii, No. 1. [669]

Physiology of kidney secretion. O. COHNHEIM. *Sitzungsber. d. Heidelb. Akad. d. Wissensch. Math.-naturw. Cl.*, 1913, vi, 1. [669]

Radiographical examination of the kidneys. S. P. GRIGORJEW. *Verhandl. d. XII Kong. russ. Chir.*, 1913, xii, 173. [669]

Clinical observations on the influence of the nerves on the secretion of the kidneys. GRASER. *Deutsche Ztschr. f. Nervenhe.*, 1913, xlvii-xlviii, 176. [669]

Anatomical changes in the kidney after ligation of the ureter. M. KAWASOYE. *Ztschr. f. gynäk. Urol.*, 1913, iv, 107. [669]

Experimental data on the influence of the injured kidney on the opposite kidney. ISOBE. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1. [669]

The pathology and treatment of nephrolithiasis. WILHELM KARAO. *Med. Klin., Berl.*, 1913, ix, 1282. [669]

Renal calculus in relation to the kidney and ureter. STEPHEN E. TRACY. *Am. J. Obst., N. Y.*, 1913, lxviii, 201. [669]

Operation of choice in renal calculus. LEGUEU. *Clinique, Par.*, 1913, viii, No. 31. [669]

Movable kidney. C. MACLAURIN. *Australas. M. Gaz.*, 1913, xxxiv, 191. [669]

Bacteriology of the urine in relation to movable kidney. DAVID HADDEN. *Cal. St. J. Med.*, 1913, xi, 326. [669]

Congenital movable kidney. CATHELIN. *Paris méd.*, 1913, No. 37. [670]

Operation for floating kidney. K. VOGEL. *Verhandl. d. Gesellsch. deutscher Naturforsch. u. Ärzte*, 1913, ii, part 2, 156. [670]

Supernumerary kidneys. SUTER. *Folia urol., Leipz.*, 1913, viii, No. 1. [670]

Two congenital renal anomalies. VAN RISSELICK. *Zentralbl. f. Chir.*, 1913, xl, 1296. [670]

Essential hæmaturia, with a report of a case cured by injection of adrenalin through the ureteral catheter. HARVEY MOORE. *Urol. & Cutan. Rev.*, 1913, xvi, 107. [670]

An unusual case of renal hæmaturia; unilateral chronic hæmorrhagic nephritis; decapsulation; apparent cure; recurrence; bilateral involvement; decapsulation of both kidneys six years later. W. G. VINCENT. *Med. Rec.*, 1913, lxxxiv, 106. [670]

On the value of a renal hæmaturia immediately following nephrectomy for tuberculosis. M. PENA. *J. d'Urol.*, 1913, iv, 43. [670]

Unilateral hæmorrhages in nephritis. STRÄTER. *Zentralbl. f. Chir.*, 1913, xl, 1297. [670]

Fibrin detritus in the renal pelvis. N. W. PETROW. *Zentralbl. f. allg. Path. u. path. Anat.*, 1913, xxiv, 633. [670]

Tumor of the left kidney. KIRMISSON. *Clinique, Par.*, 1913, viii, No. 31. [670]

Three unusual cases of renal tumor, with a discussion of the operative treatment of the condition. J. SWIFT JOLY. *Practitioner, Lond.*, xci, 179. [670]

Suppurated polycystic renal tumor associated with marked intra-cystic hæmorrhage. Removal of the same in a woman in a very weak and anæmic state under local anæsthesia; rapid recovery. LE FILLIATRE. *Bull. et mém. Soc. anat. de Par.*, 1913, lxxxvi, 389. [670]

Case of congenital cystic kidney associated with uterine fibroid. R. PETERSON. *Physician & Surg.*, 1913, xxxv, 345. [670]

Functional diagnosis of kidney disease. G. W. McCASKEY. *Lancet-Clin.*, 1913, cx, 164.

The amount of work done by diseased kidneys. Experimental researches. ST. CSERNA and G. KELEMEN. *Biochem. Ztschr.*, 1913, liii, 41.

The question of ascending infection of the kidney and the prevention of the same in implantation of the ureter into the bowel. A. J. ILJIN. *Dissertation*, St. Petersburg, 1913. [670]

Unilateral septic infection of the kidneys. A. P. CONDON. *N. Y. M. J.*, 1913, xcvi, 279. [670]

Purulent pyelitis. LEONARD D. FRESCOLN. *Urol. & Cutan. Rev.*, 1913, xvi, 425.

Unilateral painful chronic nephritis. TODDEL. *Folia urol.*, Leipzig, 1913, viii, No. 1.

Painful chronic nephritis. LE CLERC-DANDOY. *J. med. de Brux.*, 1913, xxiii, No. 31.

Thirty-four cases of chronic nephritis treated operatively since 1901. TH. ROVSING. *Cong. Verhandl. d. Nord. chir. Forening*, Kjøbenhavn, 1913.

Treatment of nephritis. C. A. WILLIAMS. *Hahneman. Month.*, 1913, xlviii, 569.

Perinephritic abscess. STUDEBAKER. *Iowa M. J.*, 1913, xx, 75.

Case of post-operative serous perinephritis. A. BAUER-EISEN. *Ztschr. f. gynäk., Urol.*, 1913, iv, 124.

Renal tuberculosis. RIVERA Y. MOSET. *Rev. de med. y cir. prat.*, Madrid, 1913, xxxvii, No. 1277.

Diagnosis of renal tuberculosis. PUYADE. *Argent. med.* Buenos Aires, 1913, xi, No. 31.

Diagnosis and treatment of tuberculosis of the kidney. PAUCHET. *Bull. méd., Par.*, 1913, xxvii, No. 62.

Localization of renal tuberculosis by radiography. PAPIN. *Arch. urol. clin. de Necker*, 1913, i, 197. [671]

Tuberculosis of the kidney and bladder including urogenital tuberculosis. RUPPRECHT. *München. med. Wchnschr.*, 1913, lx, 1459.

Radiography in renal tuberculosis. LEGUEU. *Clinique, Par.*, 1913, viii, No. 33.

A clinical lecture on tuberculosis of the urinary tract. J. HOWELL EVANS. *Lancet*, Lond., 1913, clxxxv, 273.

Infection of the urinary tract in children by the colon bacillus. J. THOMSON. *Lancet*, Lond., 1913, clxxxv, 467. [671]

Adrenal hypernephroma in the adult female associated with male secondary characters. E. GLYNN and J. T. HEWETSON. *J. Pathol. and Bacteriol.*, 1913, xviii, No. 1. [672]

Pyelography. L. JACHES. *Tr. Am. Röntg. Ray Soc.*, Boston, 1913, Oct. [672]

The technique and accidents of pyelography. LÉGUEU and PAPIN. *Arch. urol. clin. de Necker*, 1913, i, 12. [672]

Kidney surgery. H. HEIDLER. *Prag. med. Wchnschr.*, 1913, xxxviii, 507.

General clinical aspects of surgical kidney. CATHELIN. *Prog. med., Par.*, 1913, xlv, No. 33.

Experiences in renal surgery. G. VON ILLYÉS. *Buda-pest*: Franklin, 1913. [673]

Pyelotomy. ÖLSNER. *Ztschr. f. Urol.*, 1913, vii, 535.

Technique of nephro-, pyelo-, and ureterolithotomy. JOHN H. GIBBON. *Ann. Surg., Phila.*, 1913, lviii, 232. [673]

Nephropexy by means of free transplantation of bands of fascia. CORDUA. *Zentralbl. f. Chir.*, 1913, xl, No. 32.

Renal transplantations. VILLARD and PERRIN. *Lyon chir.*, 1913, x, No. 2.

The present status of renal functional tests with special reference to phenolsulphonephthalein. FROMM and SOUTHWELL. *Albany Med. Ann.*, 1913, xxxiv, 445.

The phenolsulphonephthalein test (Abel and Row-

tree's test). G. MOURIQUAND. *Lyon méd.*, 1913, cxxi, 297.

Functional diagnosis of renal affections. JANOWSKY. *Russk. Vrach.*, St. Petersburg, 1913, xii, 169.

Experimental studies of the diagnosis of kidney function. W. R. BRAIZEW. *Verhandl. d. XII Kong. russ. Chir.*, 1913, xii, 167.

Contribution to the functional diagnosis of the kidney. R. BROMBERG. *Beitr. z. klin. Chir.*, 1913, lxxxv, 411. [673]

The difference between the secretion and the retention of coloring matter in the kidney. GEORGE BÄHR. *Zentralbl. f. allg. Path. u. path. Anat.*, 1913, xxiv, 625.

Calculus anuria. HERESCU. *Spitalul*, Bucarest, 1913, xxxiii, No. 9.

Hydronephrosis produced by experimental ureteral obstruction. G. D. SCOTT. *J. Indiana St. M. Ass.*, 1913, vi, 339. [673]

Gonococcic ureterocystitis, right uropyonephrosis, nephrostomy, left pyonephrosis, posterior pyelotomy, late secondary nephrectomy. Recovery. BOULANGER. *Folia urol.*, Leipzig, 1913, vii, No. 11.

A new ureterocystoscope, arranged for ready exchange of the catheters, with a contribution to asepsis of ureteral catheterization. VOGEL. *Ztschr. f. Urol.*, 1913, vii, No. 8.

Fixation of the ureters into the large intestine. L. LEGUEU. *Gazz. d. osp. e d. clin.*, Milano, 1913, xxxiv, 848.

Bladder, Urethra and Penis

A case of traumatic intraperitoneal rupture of the bladder. BARADOUINE. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 193.

Study of vesical calculi. OLIVIERA, SOUZA and O. MORENO. *Med. moderna*, 1913, xx, 209.

Modern tendencies in the treatment of vesical calculus. IZQUIERDO SANCHEZ. *Prensa med.*, Havana, 1913, iv, No. 7.

Modern conception of treatment of vesical calculus. CATHELIN. *J. d. Prat.*, Par., 1913, xxvii, No. 32.

The surgical treatment of bladder-stone in children. TRIFILIEFF. *Chirurgia*, St. Petersburg, 1913, xxxiii, No. 193.

Foreign bodies in the bladder and their treatment. LÉGUEU. *Allg. wien. med. Ztg.*, 1913, lviii, 176. [674]

A hairpin in the bladder. LEGUEU. *Rev. prat. d. mal. d. organ. génito-urin.*, 1913, x, 203.

The relief of vesical obstruction in selected cases. H. G. BUGBEE. *N. Y. St. J. M.*, 1913, xiii, 410. [674]

Bladder deformity after ventro-suspension. WELLER VAN HOOK. *Urol. & Cutaneous Rev.*, 1913, xvi, 427.

Electro-coagulation of tumors of the bladder. LÉGUEU. *Arch. urol. clin. de Necker*, 1913, i, 131. [674]

The endovesical treatment of tumors of the bladder. L. CASPER. *Ztschr. f. Urol.*, 1913, vii, 700.

Intravesical treatment of papilloma of the bladder by electrolysis. R. OPPENHEIMER. *Ztschr. f. Urol.*, 1913, vii, 728.

A case of marked secondary hæmorrhage following operation for papilloma of the bladder by high-frequency currents. C. SCHNEIDER. *Ztschr. f. Urol.*, 1913, vii, 638.

A case of leucoplasia of the bladder. AXEL LENDORF. *Hosp-Tid.*, Kjøbenhavn, 1913, lvi, 887.

The etiology and treatment of cystitis in women. F. W. GRIFFITH. *Merck's Arch.*, 1913, xv, 240.

Transformation of a cystic into a glandular cystitis. J. FRANÇOIS. *J. d'urol.*, 1913, iv, 207. [674]

Syphilis of the bladder. A. DREYER. *Dermatol. Ztschr.*, 1913, xx, 477.

Operative treatment of diseases of the neck of the bladder and the posterior urethra. E. WOSSIDLO. *Berl. klin. Wchnschr.*, 1913, l, 1570.

Endovesical and endourethral treatment by high-frequency currents. ROBERT BACHRACH. *Folia urol., Leipz.*, 1913, vii, 685.

Epicystotomy with empty bladder. LASTARIA. *Arch. ital. di ginec., Napoli*, 1913, xvi, No. 7.

Total cystectomy for multiple or infiltrated neoplasms of the bladder. P. HERESCO. *J. d'urol.*, 1913, iv, 169.

Clinical findings relative to operative cystoscopy. LEO. BÜRGER. *Ztschr. f. urol. Chir.*, 1913, i, 419.

Cystoscopy and ureteral catheterization. MOORE. *Clin. Med.*, 1913, xx, 663.

Topography of the bladder with special reference to cystoscopy. V. C. PEDERSEN. *N. Y. M. J.*, 1913, xcvi, 353.

Angioma of the urethra as a cause of grave hæmorrhages. A. WOLFF. *Wien. klin. Wchnschr.*, 1913, xxvi, 1364.

Posterior urethroscopy by Goldschmidt's method. PRIOR. *Hosp-Tid., Kjøbenh.*, 1913, lvi, No. 37.

Internal urethrotomy. R. FRONSTEIN. *Vrach. Gaz., St. Petersburg*, 1913, xx, 925.

Plastic surgery of the male urethra. KLIOUTCHAREFF. *Chirurgia, St. Petersburg*, 1913, xxxiii, No. 193.

Multiple myoma of the penis. A casuistic communication. FRANZ STAVIANICEK. *Ztschr. f. Urol.*, 1913, vii, 635.

Tuberculosis of the penis. J. LEWINSKI. *Dermat. Ztschr.*, 1913, xx, 692.

The treatment of gonorrhœa in the male. DANIEL T. MILLER. *Indianapolis M. J.*, 1913, xvi, 321.

Genital Organs

Disturbances of the development of the testicles in children. HEINRICH VOSS. *Zentralbl. f. allg. Path. u. path. Anat.*, 1913, xxiv, 433.

Treatment of cryptorchism. HANUSA. *Zentralbl. f. Chir.*, 1913, xl, 1411.

Necrosis of the testicle from torsion of the cord; case report and observations. VISCONTINI. *Gaz. d. osp. e d. Clin., Milano*, 1913, xxxiv, No. 100.

Radical cure of malignant tumors of the testicle by extirpation of the juxta-aortic glands. MARAGLIANO. *Rif. med., Naples*, 1913, xxix, Nos. 33-34.

Tuberculosis of the testicle and hæmaturia. HENRY K. MORTON. *Med. Times*, 1913, xli, 237.

Traumatic tuberculosis of the testicles, its interpretation and treatment in respect to medicine and insurance. O. RÖPKE. *Ztschr. f. Versicherungsmed.*, 1913, vi, 161.

Surgical treatment of ectopy of the testicles. BARNABO. *Policlin., Roma*, 1913, sez. chir., xx, No. 8.

The question of reproductive potency in tuberculosis of the epididymis. FÜRBRINGER. *Deutsche med. Wchnschr.*, 1913, xxxix, 1393.

Acute non-gonorrhœal orchitis and epididymitis with special consideration of bacteriological examination. H. STROINK. *Deutsche med. Wchnschr.*, 1913, xxxix, 1551.

The treatment of gonorrhœal complications, especially gonorrhœal epididymitis, by electrargol. JULIUS FÜRTH. *Dermat. Wchnschr.*, 1913, lvi, 689.

Epididymotomy. The radical operative treatment of epididymitis. LAUREN S. ECKELS. *J. Am. M. Ass.*, 1913, lxi, 470. [675]

Connective tissue cysts of the vas deferens. PAOLO FIORI. *Deutsche med. Wchnschr.*, 1913, xxxix, 1145.

The pathogenesis of hydrocele. ZESAS. *Zentralbl. f. Chir.*, 1913, xl, No. 33.

Hydrocele and hematocele. OKINCZYC. *Prog. med., Par.*, 1913, xlv, No. 33.

The operation of hydrocele. MÜLLER. *Zentralbl. f. Chir.*, 1913, xl, 1140.

Operation on the seminal vesicles. F. VÖLCKER. *Arch. f. klin. Chir.*, 1913, ci, 1088.

The remote effects of lesions of the prostate and deep urethra. THOMAS MCCRAE. *J. Am. M. Ass.*, 1913, lxi, 477. [675]

Diagnosis and treatment of early malignant disease of the prostate. H. KÜMMELL. *Tr. Internat. Cong. Med., Lond.*, 1913, Aug. [675]

A case of syphilis of the prostate gland. MAX HESSE. *Dermat. Wchnschr.*, 1913, lvi, 685.

Four cases of atrophy of the prostate gland. VICTOR CÆSAR. *Ztschr. f. Urol.*, 1913, vii, 615.

Present status of therapy in hypertrophy of the prostate gland. E. GRUNERT. *Ztschr. f. urol. Chir.*, 1913, i, 395.

Modifications of the theory of hypertrophy of the prostate. KIELLEUTHNER. *München. med. Wchnschr.*, 1913, lx, 1701.

What value is to be ascribed to Bottini's operation in the treatment of hypertrophy of the prostate gland. EUGEN REMETE. *Ztschr. f. urol. Chir.*, 1913, i, 387.

Prostatectomy. JOHN B. DEEVER. *Surg., Gynec. & Obst.*, 1913, xvii, 157. [676]

Prostatectomy. CIMINO. *Gazz. d. osp. e d. Clin., Milano*, 1913, xxxiv, No. 90.

Suprapubic prostatectomy. HUGH CABOT. *Surg., Gynec. & Obst.*, 1913, xvii, 213. [677]

Suprapubic prostatectomy by Morcellement. D. W. BASHAM. *Urol. & Cutan. Rev.*, 1913, xvi, 428.

A modified drainage for suprapubic prostatectomy. G. H. DAY. *N. Y. M. J.*, 1913, xcvi, 425. [677]

Miscellaneous

Urologic diagnosis. E. O. SMITH. *W. Va. M. J.*, 1913, viii, 37.

Serodiagnosis of gonorrhœal affections. FINKELSTEIN and GERCHOUNE. *Russk. j. cojnuch i vener. boliez., Moscow*, 1913, xxv, No. 4.

Erection in affections of the urinary tract. REGINALDO DOS SANTOS. *Med. contemp., Lisbon*, 1913, xxxi, 182.

Hetralin in infections of the uro-genital apparatus. VIKTOR DRUCKER. *Zentralbl. f. d. ges. Therap.*, 1913, xxxi, 393.

Infection of the urinary passages with colon bacillus. HESS. *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1913, xxvi, No. 1.

Preliminary report on the cutaneous deposit reaction of gonococci bacterin. N. E. ARONSTAM. *Urol. & Cutan. Rev.*, 1913, xvi, 410.

Morphology of a species of actinomyces of the male genital organs; treatment by vaccination. T. COHN. *Zentralbl. f. Bakteriöl., Parasitenk. u. Infektionskrankh.*, 1913, lxx, 290.

The importance of the germinal glands with respect to changes in sexual passion. G. SCHICKELE. *Ztschr. f. d. ges. exp. Med.*, 1913, i, 539.

Interesting malformations of the genital organs of man. ANSPRENGER. *München. med. Wchnschr.*, 1913, lx, No. 31.

Perineal suppuration in a typhoid carrier. LEVY. *Deutsche med. Wchnschr.*, 1913, xxxix, No. 31.

A combined cystoscope and evacuator. STANTON. *N. Y. M. J.*, 1913, xcvi, 265.

Conservative surgical treatment in urology. ARTHUR SCHWENK. *Ztschr. f. ärztl. Fortbild.*, 1913, x, 456.

Uterus with two Fallopian tubes and two testicles in the herniary sac in an individual with normally developed male external genitalia. PELLEGRINI. *Ginecologia, Milano*, 1913, x, No. 5.

SURGERY OF THE EYE AND EAR

Eye

Concerning certain ocular injuries and their treatment. G. E. DE SCHWEINITZ. *Therap. Gaz.*, 1913, xxix, 533.

Cases of injury to the lens and of foreign body in the eye. J. L. GIBSON. *Australas. M. Gaz.*, 1913, xxxiv, 167.

The present approved methods of treatment of obstructions to the lacrimo-nasal duct. E. N. ROBERTSON. *J. Kansas M. Soc.*, 1913, xiii, 279. [678]

Infarction of the posterior ciliary arteries. G. COATS. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [678]

The results of the first hundred squint cases operated upon by the new method of subconjunctival reefing and advancement with lengthening of the antagonist where necessary. N. B. HARMAN. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [678]

The cause and treatment of convergent squint. A. E. BULSON. *J. Indiana St. M. Ass.*, 1913, vi, 357. [679]

Sympathetic ophthalmia, with recovery. F. C. HEATH. *J. Indiana St. M. Ass.*, 1913, vi, 364. [679]

Unusual types of punctate cataract. T. B. HOLLOWAY. *Ophth. Rec.*, 1913, xxii, 407.

Diagnosis of sarcoma of the choroid; two cases of sarcoma with decreased intra-ocular pressure and one case of sarcoma of the eye. SELENKOWSKY. *Russk. Vrach*, St. Petersburg, 1913, xii, 553.

Sarcoma of the orbit following Mules's operation. D. WOOD. *Ophth. Rec.*, 1913, xxii, 422.

Melanotic sarcoma of the choroid coat of the eyeball; report of a case with apparent secondary involvement of retina. GEORGE P. KEIPER. *Ann. Ophth.*, 1913, xxi, 445.

A huge orbital osteoma. E. M. BLAKE. *Ophth. Rec.*, 1913, xxii, 419.

Glaucoma operation. P. SMITH. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [679]

Observations on operations for glaucoma. DUNBAR ROY. *South. M. J.*, 1913, vi, 525. [679]

Dermoid of the eyes. KRAILSHEIMER. *Klin. Monatsbl. f. Augenh.*, 1913, ii, 796.

A case of bilateral orbital phlegmon following empyema of the frontal sinus and the ethmoidal cells, with special consideration of the pathological anatomical findings. S. TAKASHINA. *Klin. Monatsbl. f. Augenh.*, 1913, ii, 35.

Orbital cellulitis caused by staphylococci. S. B. MUNCASTER. *Ophth. Rec.*, 1913, xxii, 413.

Tamponade treatment of accessory sinuses for intra-ocular inflammations. WM. S. MANNING. *South. M. J.*, 1913, vi, 531.

The use of a conjunctival flap in the treatment of corneal infection and pannus. ELMER G. STARR. *Ann. Ophth.*, 1913, xxi, 471.

Ocular manifestations in nasal and aural diseases which probably indicate involvement of the sympathetic nervous system. W. H. HASKIN. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 384.

Deformity of the skull with ocular symptoms. HARALD LARSEN. *Klin. Monatsbl. f. Augenh.*, 1913, ii, 145.

Ophthalmic progress in Egypt. A. F. MACCALLAN. *Lancet*, Lond., 1913, clxxxv, 470.

The importance of ophthalmological examination in immigrants. MARTIN COHEN. *Med. Rev. Rev.*, 1913, xxix, 484.

An address on the influence of the British Medical Association in establishing ophthalmology as a special science. THOMAS H. BICKERTON. *Brit. M. J.*, 1913, ii, 213.

A contribution to the history of the magnet as applied to ophthalmic surgery. H. G. SHIPMAN. *Cleveland M. J.*, 1913, xii, 550.

Ear

Conservatively treated peri-auricular, subperiosteal abscesses in scarlet fever. SÖRENSEN. *Therap. Monatschr.*, 1913, xxvii, 568.

Abscess of frontal lobe of the brain, of otitic origin, with exhibition of specimens. T. P. BERENS. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 433.

Danger signals in suppuration of the middle ear. J. HOLLINGER. *Illinois M. J.*, 1913, xxiv, 107.

Peri-sinus abscess as a complication to acute middle ear suppuration. JAMES HARPER. *Practitioner*, Lond., 1913, xci, 213.

Treatment of chronic suppurative otitis. FERNANDEZ SECO. *Rev. de med. y cir. pract.*, Madrid, 1913, xxxvii, No. 1279.

Phylacogen in middle ear abscess. S. G. DABNEY. *Louisville Month. J.*, 1913, xx, 74.

Intracranial division of the auditory nerve for persistent tinnitus. CHARLES FRAZIER. *J. Am. M. Ass.*, 1913, lxi, 327.

The diagnosis of rupture into the lateral ventricle and of acute internal meningitis. E. RUTTIN. *Laryngoscope*, 1913, xxiii, 819.

Brief consideration of certain recent views regarding otosclerosis. T. HARRIS. *Laryngoscope*, 1913, xxiii, 801.

Abscess of the vestibule of dental origin. FARGIN-FAYOLLE. *Paris méd.*, 1913, No. 35.

Two cases of loss of caloric vestibule reaction, with operative findings. E. B. DENCH. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [679]

Report of twenty cases of inflammatory affections of the labyrinth. PHILLIPS, FOWLER, KOPENTZKY and SHARP. *N. Y. M. J.*, 1913, xcvi, 209.

When to operate on the labyrinth in labyrinth infection secondary to purulent otitis media. G. E. SHAMBAUGH. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 303. [680]

The technique of the labyrinth operation. E. B. DENCH. *Laryngoscope*, 1913, 814.

Trephining of the labyrinth for vertigo and buzzing in the ears. R. BOTEY. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [680]

Anatomical preparations to illustrate trephining of labyrinth. R. BOTEY. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [681]

The report of a case of paracoustic vertigo and nystagmus cured by operation on the labyrinth. J. R. PAGE. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 321.

Diagnosis and treatment of acute mastoiditis. GEORGE H. MATHEWSON. *Canad. M. Ass. J.*, 1913, iii, 672.

Mastoiditis; diagnosis; non-surgical treatment and indications for operation. C. A. HARKNESS. *Clinique*, 1913, xxxiv, 427.

Surgical anatomy of the mastoid. J. MOURET. *Tr. Internat. Cong. Med.*, Lond., 1913, Aug. [681]

The combined laboratory and X-ray indications for the mastoid operation. G. S. DIXON. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 369.

Clinical indications for the mastoid operation. W. S. BRYANT. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 482.

The radical mastoid operation in children. D. G. YATES. *Am. J. Surg.*, 1913, xxvii, 293.

Management of mastoid wounds. W. S. BRYANT. Tr. Internat. Cong. Med., Lond., 1913, Aug. [681]

Dangers of ligating the jugular vein in otology and possibility of preventing them. KRAMPITZ. Internat. Zentralbl. f. Ohrenheilk. u. Rhino-Laryngol., 1913, xi, 161. [682]

Pharyngeal drainage of cranial suppurations of otogenous origin. P. JACQUES. Tr. Internat. Cong. Med., Lond., 1913, Aug. [682]

Illuminated ear speculum. FREDERICK A. KIEHLE. J. Am. M. Ass., 1913, li, 491.

SURGERY OF THE NOSE, THROAT, AND MOUTH

The correction of nasal deformities, particularly lateral deflections and depressions with obstructing deviations of the septum. G. M. MARSHALL. Penn. M. J., 1913, xvi, 853.

Odd cases of nasal deflection with suggestions as to treatment of nasal adhesions. OTIS H. McCLAY. Illinois M. J., 1913, xxiv, 129.

The septum nasi and its abnormalities. FRANCIS MUECKE. Practitioner, Lond., 1913, xci, 202.

Pathology and diagnosis of malignant diseases of the nose and nasal-pharynx. H. MARSCHIK. Tr. Internat. Cong. Med., Lond., 1913, Aug. [683]

Unusual bullet wound of frontal sinus. KENNETH FULKLEY. J. Am. M. Ass., 1913, li, 412.

Post-operative dry rhinitis and its prevention; a contribution on the prevention of post-operative cerebral complications of nasal origin. RHESE. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw., 1913, lxix, No. 1.

Hypertrophic rhinitis and hyperostosis of the superior maxilla. T. B. LAYTON. Guy's Hosp. Gaz., 1913, xxvii, 343.

Atrophic rhinitis with ozena — its etiology and surgical treatment. F. P. EMERSON. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 333.

Tumors of the septum. R. H. JOHNSTON. Laryngoscope, 1913, xxiii, 834.

Temporary resection of superior maxilla for ossifying chondroma of nasopharynx. KOCHER and HORAND. Lyon chir., 1913, x, 135. [683]

Radium treatment of rhinophyma. DEGRAIS. Strahlentherapie, 1913, iii, No. 2.

Polypi. V. H. WYATT WINGRAVE. Practitioner, Lond., 1913, xci, 192.

Two cases of nasopharyngeal polyp; some points on operative technique. DENIS and VACHER. Rev. hebdomadaire de laryngol., d'otol. et de rhinol., Bordeaux, 1913, No. 31.

Two cases of nasopharyngeal polypus in young persons mistaken and operated on for adenoids. BUTT. Penn. M. J., 1913, xvi, 861.

Intranasal treatment of Meckel's ganglion. E. M. HOLMES. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 350.

Some attempts at the intranasal transplantation of nasal tissues. S. IGLAUER. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 308. [683]

Intranasal opening of the superior maxillary sinus. OSWALD LEVINSTEIN. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 419.

A case of purulent meningitis after an intranasal intervention. REISCHIG. Ztschr. f. Ohrenh. u. f. d. Krankh. d. Luftw., 1913, lxix, No. 1.

Conservatism versus radicalism in nasal surgery. NEWTON BOWMAN. Tex. Med. News, 1913, xxii, 1506.

Adenoids and enlarged tonsils. T. M. MARTIN. Clin. J., 1913, xlii, 329.

Removal of adenoids by direct inspection. J. C. BECK. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 273. [683]

The removal of adenoids and tonsils in children. A. COOLIDGE and F. E. GARLAND. Boston M. & S. J., 1913, clxix, 306.

The enucleation of tonsils and removal of adenoids. H. BULLOCK. Australas. M. Gaz., 1913, xxxiv, 197.

Gangrenous tonsil. U. S. BIRD. South. M. J., 1913, vi, 539.

The significance of plasma cells in the tonsils. GORDON J. WILSON. J. Am. M. Ass., 1913, li, 345.

The symptoms of pathological lingual tonsil and its treatment. HAROLD HAYS. Am. J. Surg., 1913, xxvii, 309.

Report of a case of phlegmon starting as a peri-tonsillar abscess and extending downward as far as the second ring of the trachea. G. L. RICHARDS. Laryngoscope, 1913, xxiii, 835.

Is the present immolation of the tonsil justifiable? J. A. WHITE. Va. M. Semi-Month., 1913, xviii, 237.

Treatment of the pharyngeal tonsil. R. GOLDMANN. Monatschr. f. Ohrenh. u. Laryngo-Rhinol., 1913, xlvii, 1029.

Simplified technique for the removal of the faucial tonsils. L. F. LONG. Laryngoscope, 1913, xxiii, 838.

Indications for and relative value of tonsillotomy. J. L. GOODALE. Tr. Internat. Cong. Med., Lond., 1913, Aug. [684]

Results in a series of cases of tonsillectomy at the Massachusetts General Hospital, three to four years after operation. J. P. CLARK. Ann. Otol., Rhinol. & Laryngol., 1913, xxii, 421.

The pathology of the various acute inflammations of the throat and neck including acute oedema, phlegmon and erysipelas and angina lucovici but excluding diphtheria. P. R. W. DE SANTI. Tr. Internat. Cong. Med., Lond., Aug. [684]

Safety pin removed from the larynx of a child by direct laryngoscopy. HARMON SMITH. N. Y. M. J., 1913, xcvi, 313.

The normal and the diseased larynx of the living in the X-ray picture. THOST. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 501.

Chronic stenosis of the larynx and trachea. C. A. LEAVY. Laryngoscope, 1913, xxiii, 841.

The treatment of diphtheritic stenoses; data furnished by the Wladimir Children's Hospital in Moscow (for the years 1897-1911). N. U. USSPENSKI. Paediatrica, 1913, No. 4, 257.

Remarks and results on twenty cases of laryngeal diphtheria requiring tracheotomy. C. E. PURCELL. Laryngoscope, 1913, xxiii, 849.

Dysphagia in tuberculosis of the larynx. RÉTHI. Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb., 1913, vi, 512.

Notes on the tubercular laryngitis. D. A. VANDERHOOF. J. Mo. St. M. Ass., 1913, x, 60.

Effect of pneumothorax treatment on laryngeal tuberculosis. E. WINCKLER. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, vi, 293.

Metastatic abscesses in the musculature of the larynx. R. IMHOFER. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, vi, 281.

A report of a case of carcinoma of the larynx, with complete laryngectomy, and two cases of papilloma of the larynx, with thyrotomy. A. J. LORIE. *Physician & Surg.*, 1913, xxxv, 358.

Acute primary infectious oedema of the larynx and its microbiological relationship. BAR. *Ann. d. mal. de l'oreille, du larynx, du nez, et du pharynx*, Par., 1913, xxxix, No. 7.

Suspension laryngoscopy with demonstration of method. W. FREUDENTHAL. *Ann. Otol., Rhinol. & Laryngol.*, 1913, xxii, 464.

The best method for extirpating the larynx. R. BOTEV. *Tr. Internat. Cong. Med., Lond.*, 1913, Aug. [685]

Complications in the cure of a case of total extirpation of the larynx and the pharynx for carcinoma. HOLSCHER. *Ztschr. f. Laryngol., Rhinol. u. i. Grenzgeb.*, 1913, vi, 512.

Laryngectomy subsequent to tracheotomy for epithelioma of the larynx. DAN MCKENZIE. *Lancet*, Lond., 1913, clxxxv, 287.

Intubation. R. W. BEMIS. *Penn. M. J.*, 1913, xvi, 859.

Endothelioma or epithelioma of the epiglottis. SSAMOYLENKO. *Beitr. z. Anat., Physiol., Path. u. Therap. d. Ohres, d. Nase u. d. Halses*, 1913, vi, Nos. 4-6.

Acute retropharyngeal abscess. ALEXANDER and MONTAGUE. *N. Y. M. J.*, 1913, xcvi, 224.

Primary malignant growths in the pharynx. E. OPPENKOFER. *Arch. f. Laryngol. u. Rhinol.*, 1913, xxvii, 526.

The physiology of the mechanism of deglutition from röntgenocinematographic pictures. L. KUPFERLE. *Arch. f. d. ges. Physiol.*, 1913, xlii, 579.

A brush-shaped kerato-epithelioma of the mucous membrane of the cheek, being a contribution to the etiology and histopathogenesis of cornu cutaneum. GEORGE KONJETZNY. *Beitr. z. path. Anat. u. z. allg. Path.*, 1913, lvii, 57.

Authoritative diagnosis of gonorrhoeal stomatitis. JOHN BETHUNE STEIN. *Med. Rec.*, 1913, lxxxiv, 242.

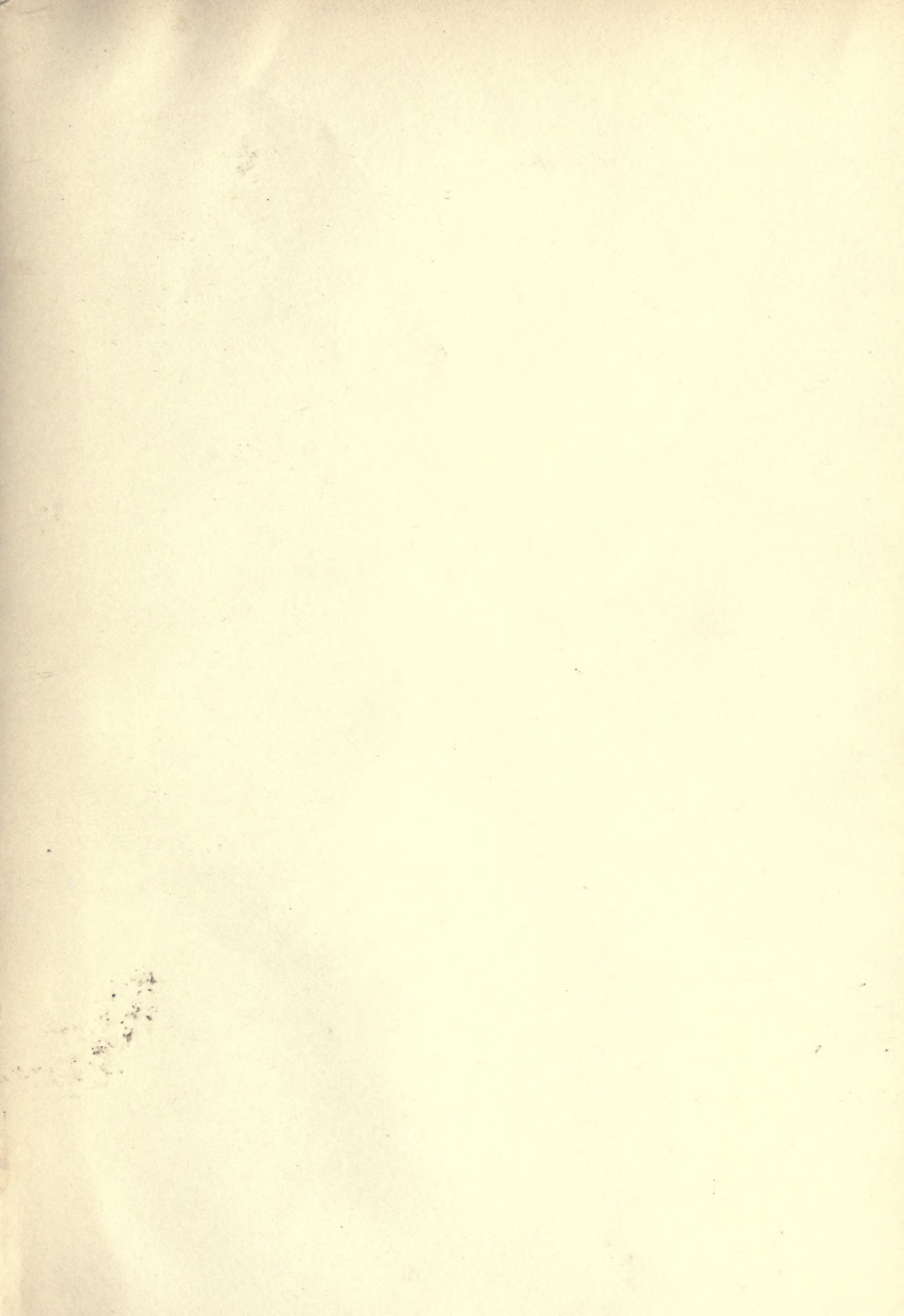
Ademantinomata. JOHANNES IPSEN. *Hosp.-Tid., Kjøbenhavn.*, 1913, lvi, 898.

Solitary cysticercous of the tongue. R. HAHN. *Arch. ital. di otol., rhinol. e. laringol.*, 1913, xxiv, 272.

Curability of cancer of the tongue. BAUDET. *Gaz. d. Hôp., Par.*, 1913, lxxxvi, No. 89.

Ethyl chloride anesthesia in operative dentistry. A. KNEUCKER. *Wien. klin. Wchnschr.*, 1913, xxvi, 1277.

Allypin in dentistry. KRAUSE. *Deutsche zahnärztl. Wchnschr.*, 1913, xvi, 585.



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